A STUDY TO EVALUATE THE EFFECTIVENESS OF GUIDED IMAGERY ON PAIN AND QUALITY OF LIFE AMONG PATIENTS WITH CANCER IN A SELECTED HOSPITAL AT COIMBATORE

COIMBATORE

A DISSERTATION SUBMITTED TO THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILMENT OF REQUIREMENT FOR THE DEGREE OF

MASTER OF SCIENCE IN NURSING

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BY

MAHESWARI. G

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2. EXTERNAL EXAMINAR…….…….……...

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DEDICATION

****

I dedicate this book to the

God almighty who blessed me to finish this

work successfully

I dedicate this book to my lovable Parents

Mr.P.GNANASUNDRAM and Mrs.G.VANAJA, and my brother **Mr.G.**

BALASUBRAMANI, DPE.,

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Mrs.M.BAGAVATHI.,

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Mr.M.AMIRTHAVEL

who stood by me as a rock of purpose to cheer me up

I dedicate this book to my daughter Little Flower

A.PRANAVIKA

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****

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HIS GREATNESS NO ONE CAN FATHOM".

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ABSTRACT

INTRODUCTION: Most patients with cancer experienced pain during treatment and its side effects of treatment. Ignoring this pain can contribute to worsening overall well-being of patients and slowed recovery process.

OBJECTIVE: The objective of this study was to investigate the effectiveness of guided imagery on pain and quality of life among patients with cancer.

DESIGN: A quantitative evaluative approach, a quasi experimental non randomized control group design.

PARTICIPANTS: 60 patients with cancer were selected by using non probability purposive sampling technique in Ashwin Hospital at Coimbatore.

INTERVENTION : Guided imagery twice a day for 20 minutes duration for 5 consecutive days was given to the experimental group.

TOOL: Standardized Verbal Descriptor Pain Assessment scale was used to evaluate the level of pain and modified EORTC QLQ-C30 scale was used to evaluate the quality of life.

RESULT: Analysis and interpretation was done by using independent 't' test and paired 't' test found significant values for pain 19.25 & 24.03, for quality of life 4.11 & 3.42 respectively at $p<0.05$ level and 'r' value was -0.37.

CONCLUSION: Guided Imagery resulted in reduction in level of pain and improved quality of life among patients with cancer.

Key words: Guided Imagery, Pain, Quality of Life, Cancer.

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CHAPTER I

INTRODUCTION

"The quality of life is more important than life itself"

- Alexis Carrel

Background of the Study

Cancer is a common condition and a serious health problem. More than one in three people will develop some form of cancer during their life time. The origin of the word cancer is credited to the Greek physician Hippocrates, who is considered the "Father of Medicine". Hippocrates used the terms 'carcinos' and 'carcinoma' to describe non- ulcer forming and ulcer-forming tumors. The Roman Physician, Celsus later translated the Greek terms into cancer.

Cancer is a general term used to refer to a condition where the body's cells begin to grow and reproduce in an uncontrollable way. These cells can then invade and destroy healthy tissue, including organs. Cancer sometimes begins in one part of the body before spreading to other parts.

The biggest risk factor for developing cancer is age, with the majority of cancers more common in older than younger people in Northern Ireland. There are many other risk factors for developing cancer including, smoking, drinking alcohol, obesity, poor diet, lack of exercise, prolonged exposure to sun light etc.

Cancer patients often experience significant symptoms due to tumour and cancer treatments. Pain is a common symptom of cancer and experienced both by patients and caregivers. Most cancer pain is caused by the tumour pressing on bones, nerves or other organs of the body. Sometimes pain is related to cancer treatment like chemotherapy drugs that cause numbness and tingling sensation in the hands and feet or a burning sensation at the place where they are injected. Radiotherapy can cause skin redness and irritation. Some of them may have the general aches and pains from time to time.

According to Davis. M, (2010) cancer pain is a complex temporarily changing symptom which is the end result of mixed pain mechanism. It involves inflammatory neuropathic, ischemic and compression mechanism at multiple sites. It is a subjective, heterogeneous experience that is modified by individual genetics, past history, mood, expatiation and culture.

Cancer pain can be acute or chronic. Acute pain is due to damage caused by an injury and tends to last for a short time. Chronic pain is caused by changes to nerves. Nerve changes may occur due to cancer pressing on nerves or due to chemicals produced by a tumour. It can also be caused by cancer treatment.

Pain can greatly affect the quality of life of the cancer patient. Chronic pain can make it hard to do everyday things such as bathing, shopping, cooking, sleeping and eating and also about half of all patient's moderate or severe pain diminish their quality of life by adversely affecting mood, sleep, social relations and activities of daily living. Yet for many years, as doctors concentrated on treating the cancer as

effectively as possible, a patient's quality of life often was the last thing considered. So many researchers are found the challenge of helping patients and survivors maintain or regain a sense of well-being.

World Health Organization (2008) has identified cancer pain as a major international problem and pain control has become a critical element in the comprehensive care of many cancer patients. More patients surviving with cancer are experiencing period of significantly extended life as a result of advances in early diagnosis and treatment.

Tannock I, et al (1989) found that improvement in multiple areas of quality of life and in well being coincided with reduction in pain associated with bone metastasis from prostate cancer.

Padilla, et al (1990) studied cancer patients with chronic pain and identified three dimensions of life affected by the pain experience : physical well-being, psychological well-being and interpersonal well-being.

According to National Cancer Institute (2013) pain can be controlled in most patients with cancer. Although cancer pain cannot always be relieved completely, there are ways to lessen pain in most patients. Pain control can improve quality of life all through cancer treatments and after it ends.

Treatment for cancer will depend on many factors, such as the stage and location of cancer. Treatment for cancer usually include one or a combination of and :

surgery, chemotherapy, radiation therapy, hormone therapy, immunotherapy, gene therapy, along with that complementary and alternative therapy that are used for the cancer treatment. The complementary therapies are mind- body approaches which includes guided imagery, meditation, massage therapy, body-mind practices like Yoga, aerobic exercise etc.

According to Martin Rossman, Diplac, (2007) the two goal of complementary therapies are to kill cancer cells and tumour or reduce their numbers and ability to grow, reproduce and metastasis. The other perhaps best called the healing goal is to support the well-being and resistance of the patient.

Imagery influences the experience of pain by acting as a cognitive distraction. Imagery may function as one of many relaxation techniques. The relaxation effect results in reduction of autonomic activity and the concomitant physiological responses to catecholamine production. In addition, relaxation may facilitate the release of endorphins which bind to opioid receptor sites in the central nervous system and block the transmission of painful impulses.

Canadian Cancer society (2009) reported that guided imagery is also called visualization. It is a type of mind- body therapy. For people with cancer a common method is to imagine their own body fighting and beating the cancer. Guided imagery may reduce some of the side effects for cancer treatment including pain, nausea and vomiting and lower anxiety during medical procedures.

Alternative and Complementary Medicine, American Health Oncology Consultants (1999) published an article on guided imagery as supportive therapy in cancer treatment. The review results showed that psychological problems and deterioration of quality of life caused by pain, severe nausea, stress are just a few of the hurdles faced by those fighting this disease. Guided imagery, a cognitive intervention has been implemented with increasing frequency as a therapeutic option for many encountering these difficulties.

Imagery involves mental exercises designed to allow the mind to influence the health and well-being of the body. The patient imagines sights, sounds, smells, tastes or other sensations to create a kind of purposeful day dream. It is used with standard medical treatment in people with cancer and other diseases.

According to Cathy Wong, (2012) for people coping with cancer, guided imagery may help alleviate a number of emotional and physical problems. A technique that involves using visualization to achieve deep relaxation guided imagery has been found to improve quality of life, reduce pain, ease stress and offer several other health benefits to cancer patients.

As reported on the website of the Mayo Clinic (2008) guided imagery has been shown to benefit patients by improving quality of life and reducing pain, anxiety prior to surgery, reducing the side effects of cancer treatment.

John Russo. D (2006) conducted a study on effectiveness of guided imagery as complement pain therapy among 44 patients with chronic pain. The study concluded that guided imagery was an effective supplement to medication therapy.

Battling cancer is one of the complex journey facing by the people throughout their normal life. There is growing recognition that cancer patients benefit from various types of support as they go through their journeys, ranging from informational to decision-making, physical, nutritional, psychological, social, and spiritual support. Guided imagery encourages patients to access their own strengths and resources and tends to lead toward greater autonomy and self efficacy.

Guided imagery in its various forms is becoming quickly and widely accepted as a useful technique in the treatment of people with cancer largely due to its ease of use, low cost and rapid psychological benefits. Because of this reasons the investigator selected guided imagery to reduce pain and improving the quality of life among patients with cancer.

Need for the Study

According to the National Cancer Institute (2013) cancer is the second leading cause of mortality in the United States, accounting for nearly 1 in every 4 deaths and it estimates that 1,660,290 new patients diagnosed with cancer and about 580,350 Americans are expected to die from cancer of all sites in 2013.

According to World Cancer Research Fund International (2013), the latest cancer statistics worldwide based on GLOBO CAN 2008, there were an estimated

12.7 million cancer cases around the world in 2008. The number is expected to rise to 21 million by 2030.

According to Cancer Research UK (2010) more than 324,500 people were diagnosed with cancer in the UK in 2010.

According to National Cancer Institute (2008) over all cancer incidence was 470.1 and death rate was 192.1.

According to World Health Organisation (2013) approximately 47% of cancer cases and 55% of cancer deaths occur in less developed regions of the world. By 2030, if current trends continue, cancer cases will increase by 81% in developing countries. Approximately 50% of cancer in developing countries occurs in individuals less than 65 years of age. This is a tragedy for families and for populations, and has the potential to have a long-term impact on economic development.

According to the Cancer Information Network (2006) between 30% and 50% of cancer patients experience pain and approximately 70% experience severe pain at some point during the course of their disease.

According to the U. S. Centres for Disease Control and Prevention and the National Cancer Institute (2010) 66.4 % of adults diagnosed as cancer are expected to be alive for five years. Five -years survival rates vary according to the type of cancer. These rates were in Female breast cancer (85.5%), Colorectal cancer (64.4%), Lung and bronchus cancer (15.2%), Prostate cancer (98.9%), Pancreas cancer (5.1%).

According to Department of Cancer, G.Kuppuswamy Naidu Memorial Hospital in Coimbatore , Tamilnadu, South India, (2011) incidence rate of cancer was nearly 10 lakh cases in 2010.

Walker LG, et al (1999) conducted a comparative study on effectiveness of guided imagery and relaxation on quality of life among 96 breast cancer patients. The study revealed that those who used guided imagery and relaxation were more relaxed during chemotherapy and had a better quality of life. The study concluded that relaxation and guided imagery were "simple, inexpensive and beneficial" for patients undergoing chemotherapy.

Cathy Wong, (2012) conducted a randomised experimental study on guided imagery for 30 minutes in reducing cancer pain among 126 cancer patients in Taiwan. The study revealed that the experimental group had more pain relief than the control group. It was concluded that guided imagery is effective in pain reduction.

Cathy Wong, (2012) conducted a experimental study to evaluate the effectiveness of guided imagery on pain among 62 hospitalized cancer patients. The study revealed that experimental group had reduced pain intensity. The study concluded that guided imagery was effective in reduction of pain.

Based on the above literature review, the incidence and prevalence rate of cancer is increasing across the country. Pain is a common symptom among patients with cancer. It is caused by tumour, treatment and its side effects of treatment. Pain can greatly affect the quality of life of the cancer patients during everyday activities.

So the investigator needs to provide one of the non pharmacological and complementary management (Guided Imagery) to the patients with cancer. It is a simple technique which helps to reduce the level of pain and improve quality of life among patients with cancer.

Statement of the Problem

A Study to Evaluate the Effectiveness of Guided Imagery on Pain and Quality of life Among Patients with Cancer in a Selected Hospital at Coimbatore.

Objectives

- To assess the level of pain among patients with cancer.
- To assess the quality of life among patients with cancer.
- To determine the effectiveness of guided imagery on pain and quality of life among patients with cancer.
- To determine the relationship between level of pain and quality of life among patients with cancer.
- To determine the association between level of pain among patients with cancer and selected demographic variables.
- To determine the association between quality of life among patients with cancer and selected demographic variables.

Hypothesis

H1: There will be significant difference between mean pre and post test level of pain among patients with cancer.

H2: There will be significant difference between mean pre and post test quality of life among patients with cancer.

H3: There will be significant relationship between level of pain and quality of life among patients with cancer.

H4: There will be significant association between level of pain among patients with cancer and their selected demographic variables.

H5: There will be significant association between quality of life among patients with cancer and their selected demographic variables.

Operational Definitions

Effectiveness

It means successful in producing the result of an action.

It refers to the outcome of guided imagery in terms of reduction in level of pain and improvement in quality of life among patients with cancer.

Guided Imagery

Merriam - Webser's dictionary defines guided imagery as: "any of various techniques (as a series of verbal suggestions) used to guide another person or oneself in imagining sensations and especially in visualizing as image in the mind to bring about a designed physical response (as a reduction in pain, anxiety or stress)."

In this study, it refers to as intervention, in which the patient is purposefully guided by an audio and video recording on "forest scenes" given for 20 minutes, twice a day for 5 consecutive days in order to reduce the pain and improve the quality of life among patients with cancer.

Pain

Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage.

In this study, it refers to unpleasant sensory and emotional feeling experienced by the patients with cancer and its treatments. Pain is measured by using Standardised Verbal Descriptor Pain Assessment Scale.

Quality of Life

The World Health Organization defines Quality of life as "an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, personal beliefs, social relationships and their relationship to salient features of their environment".

In this study, it refers to the self perception of patients with cancer regarding physical, emotional, social and financial dimension. It is measured by using modified European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire Core-30 (EORTC QLQ-C30) scale.

Patients with Cancer

In this study it refers to persons who are diagnosed with various types of cancer and admitted in selected hospital at Coimbatore.

Delimitations

- The study was delimited to patients admitted in selected hospital.
- Data collection was delimited to a period of 6 weeks.

Assumptions

- Most of the patients with cancer clients are unfamiliar about the use of guided imagery.
- Guided imagery is useful in reducing the physical, emotional problems associated with cancer.
- Guided imagery is effective in reduction of pain and promoting quality of life among patients with cancer.
- Guided imagery has no side effects on patients with cancer.
- Guided imagery is a simple and cost effective measure to reduce pain and improve quality of life.

Projected Outcomes

- The study findings will help the nurses to assess the level of pain and quality of life by using Standardised Verbal Descriptor Pain Assessment scale and modified EORTC QLQ – C30 scale.
- This study findings will identify the benefits of practicing guided imagery among patients with cancer.
- The study findings will help the patients to motivate the practicing of guided imagery to improve the quality of life and reducing the pain.

CHAPTER II

REVIEW OF LITERATURE

Review of literature is a backbone of any research project. According to Polit and Hungler (2004), literature review is a critical summary of research on a topic of interest, often prepared to put a research problem in context.

According to Basavanthappa BT, review of literature is defined as "a broad, comprehensive, in depth, systematic and critical review of scholarly publications, unpublished scholarly print materials, audio-visual materials and personal communications".

For the study, the literature reviews are divided into following,

- Studies related to pain and quality of life in cancer.
- Studies related to guided imagery.
- Studies related to effectiveness of guided imagery on pain.
- Studies related to effectiveness of guided imagery on quality of life.

Studies related to Pain and Quality of Life Among Patients With Cancer

Ping Yang, Li Qiu sun, Qian Lu, Dong Pang, Yue Ding, (2012) conducted a study on quality of life among 643 cancer patients with pain in China by using 0-10 numeric pain rating scale and EORTC QLQ - C30. The study revealed that patients with pain had a lower quality of life scores. The study concluded that cancer patients with pain had a poor quality of life.

Yamagishi A, Morita T, Miyashita M, Lgarashi A, Akiyama M, Akizuki N, Shirahige Y, Eguchi K, (2012) conducted a multicenter survey on pain intensity, quality of life, quality of palliative care and satisfaction in Japan among 1493 outpatients with recurrent cancer by adapting survey method by using brief pain inventory, good death inventory, care evaluation scale and a six point satisfaction scale. The study revealed that approximately 20% of patients reported moderate to severe pain, 20% reported that improvement is necessary in physical care, 13% reported some levels of dissatisfaction. The study concluded that a considerable number of outpatients with metastatic or recurrent cancer experienced severe pain and improvement in palliative care.

Heydarnejad MS, Dehkordi A Hassanpour and Dehkordi K Solati, (2011) conducted a cross sectional study on factors affecting quality of life among 200 cancer patients undergoing chemotherapy in Africa by using EORTC QLQ -C30 questionnaire. The study revealed that a significant relationship between the cancer type, pain intensity and fatigue was found when patients with less than or equal to 2 chemotherapy cycles and/or with 3-5 cycles. The study concluded that patients treated with more than 3-5 cycles of chemotherapy had poor quality of life.

Duraipandi Arunahcalam, Ammapattian Thriumoorthy, Saraswathi Devi and Thennarasu, (2011) conducted a descriptive study on quality of life among 120 patients with disfigurement due to cancer and its treatments in South India by adapting simple random sampling technique by using WHO QOL – BREF questionnaire. The study revealed that majority of patients experienced poor quality

of life in all dimensions like physical health, psychological health, social relationship, environmental health and other socio demographic variables.

Nordgren M, Hammerlid E, Bjordal K, Ahlner-Elmqvist M, Abendstein H, Boysen M, Jannert M , (2008) conducted a prospective longitudinal multicenter study on quality of life among 122 patients with oral carcinoma in Sweden by adapting EORTC QLQ-C30, EORTC QLQ-H&N35 scale. The study revealed that health related quality of life has changed based on the year of diagnosis and long-term side effects of the treatment. The study concluded that quality of life was poor after 5 years of oral carcinoma.

Lidgren M, Wilking N, Jonsson B, Rehnberg C, (2007) conducted a study on health related quality of life among 361 breast cancer patients in Sweden by adapting ED-5D self classifier and a direct Time Trade off (TTO) questionnaires. The study revealed that quality of life score was poor in the metastatic stage of breast cancer. The study concluded that patients with metastatic disease have lowest health related quality of life.

Nordgren M, Jannert M, Boysen M, Ahlner-Elmqvist M, Bjordal K, Hammerlid E, (2006) conducted a prospective multicenter study on health related quality of life among 89 patients with pharyngeal carcinoma in Sweden by adapting EORTC QLQ- C30, EORTC QLQ-H&N35 scale. The study revealed that patients with hypopharyngeal carcinoma had poor quality of life than patients with oropharyngeal carcinoma. The study concluded that pharyngeal carcinoma patients

are having poor quality of life due to long-term side effects such as dry mouth, problems with teeth and thick secretions.

Arndt V, Merx H, Stegmaier C, Ziegler H, Brenner H, (2005) conducted population based study on quality of life among 439 patients with colorectal cancer in Germany by adapting EORTC QLQ – C30 scale. The study revealed that colorectal cancer patients had a lower quality of life in their physiological, cognitive and global health functioning. The study concluded that quality of life was poor among patients with colorectal cancer.

Cengiz M, Ozyar E, Esassolak M, Altun M, Akmansu M, Sen M, Uzel O, Yavuz A, et al, (2005) conducted a study on assessment of quality of life among 187 nasopharyngeal carcinoma patients in Turkey by using EORTC QLQ - C30 questionnaire and H&N-35 module. The study revealed that concomitant chemotherapy adversely affected the quality of life of the patients compared to adjuvant chemotherapy. The study concluded that nasopharyngeal carcinoma patients had poor quality of life during their treatment.

Petruson K, Mercke C, Lundberg LM, Silander E, Hammerlid E,(2005) conducted a longitudinal study on evaluation among 90 patients with cancer in the oral, tongue, tonsils or base of tongue in Sweden by using EORTC QLQ C-30 and EORTC H&N module. The study revealed that patients with oral, tongue, tonsil cancer reported significant problems with dry mouth and swallowing solid food. The study concluded that cancer patients have decreased health related quality of life during their treatment.

Tschudi H, Stoeckli S, Schmid S, (2003) conducted a retrospective chart review on quality of life after different treatment modalities for carcinoma of the oropharynx among 99 patients in Switzerland by using EORTC QLQ-C30 and QLQ-H&N35 questionnaires. The study revealed that there is no significant changes in quality of life score. The study concluded that quality of life was poor after different treatment modalities.

Nordgren M, Abendstein H, Jannert M, Boysen M, Ahlner-Elmqvist M, Bjordal K, Hammerlid E, (2003) conducted a prospective longitudinal multicenter study on health related quality of among 86 laryngeal carcinoma patients in Sweden by adapting standardized health related quality of life questionnaires : EORTC QLQ-C30, EORTC QLQ-H&N35, Hospital Anxiety and Depression Scale (HADS). The study revealed that some significant changes in health related quality of life were found between prior diagnosis and 5 years after diagnosis. The study concluded that the quality of life has changed based on the year of diagnosis and duration of treatment.

Hammerlid E, Silander E, Hornestam L, Sullivan M, (2001) conducted a longitudinal study on health related quality of life among 232 head and neck cancer patients in Sweden by adapting EORTC QLQ - C30, EORTC QLQ-H&N 35 and the Hospital anxiety and depression scale (HADS). The study revealed that quality of life was worse during treatment and advanced stage of disease. The study concluded that largest health related quality of life was poor among head and neck cancer patients.

Studies related to Guided Imagery

Lai WS, Chao CS, Yang WP, Chen CH, (2010) conducted a pilot study on efficacy of guided imagery with theta music among 53 advanced cancer patients with dyspnea in Taiwan by adapting one group pre test post test research design by using modified Borg Scale (MBS). The study revealed that 90% of the subjects gave positive qualitative results of guided imagery with music. The study concluded that guided imagery with music is an useful intervention for palliative care of patients with dyspnea. Guided imagery with music was more effective than music alone.

Lengacher CA, Bennett MP, Gonzalez L, Gilvary D, Cox CE, Cantor A, Jacobsen PB, Yang C, et al, (2008) conducted a pilot study on immune responses to guided imagery during breast cancer treatment among 28 patients in USA by using pre-test , post-test experimental design. The study revealed that guided imagery could have an effect on natural killer cell cytotoxicity after activation with 1L – 2 in patients undergoing surgery for breast cancer. The study concluded that guided imagery was more effective in improving immune response.

Freeman L, Cohen L, Stewart M, White R, Link J, Palmer JL, Welton D,(2008) conducted a clinical trial on imagery intervention for recovering breast cancer among 34 patients in USA by using functional assessment of cancer treatment global index scale. The study revealed that improvements in survivor's quality of life related to physical, social family, emotional and functional well-being. The study concluded that guided imagery was effective in improving the survivor's quality of life.

Kolcaba K, Fox C, (1999) conducted an experimental longitudinal randomized study on the effect of guided imagery on comfort of women with early stage breast cancer undergoing radiation therapy among 53 patients in USA by using radiation therapy comfort questionnaire. The study revealed a significant differences between experimental and control groups. The study concluded that guided imagery is an effective intervention for enhancing comfort of women undergoing radiation therapy for early stage breast cancer.

Studies related to Effectiveness of Guided Imagery on Pain

Vasantha G, Almeida Victoria D, Kanagaraj R, (2013) conducted a one group pre-test post-test pre experimental study on effectiveness of guided imagery on intensity of pain and quality of life among 30 patients with cancer in South India by using visual analogue scale and (modified) FACT-G quality of life scale. The study revealed that the mean post intervention intensity of pain and quality of life score was lower than mean pre-intervention intensity of pain and quality of life score. The study concluded that guided imagery is an effective strategy in reducing the intensity of pain and improving the quality of life of cancer patients.

Kristine L, Kwekkaboom, Ph.D. RN, Hannah Hau, BSN RN, Britt Wanta, MS, RN and Molly Bumpus BSN, RN, (2008) conducted an experimental study on patients perceptions of the effectiveness of guided imagery and progressive muscle relaxation interventions used for cancer pain among 26 patients in USA by adapting two day cross over design by using 0-10 numeric pain rating scale. The study revealed that 16 participants reported that the guided imagery intervention relieve their pain, 10 participants reported that progressive muscle relaxation intervention

relieve their pain. The study concluded that a majority of patients perceived the guided imagery is relieving pain than the progressive muscle relaxation intervention.

Kwekkeboom KL, Kneip J, Pearson L, (2003) conducted a pilot study to predict success with guided imagery on pain among 62 hospitalized cancer patients by adapting one group pre-test and post-test design by using 0 to 10 numeric pain rating scale. The study revealed that cancer patients experienced reduction of pain after intervention. The study concluded that guided imagery is an appropriate intervention for individual cancer patients.

Syrjala KL, Donaldson GW, Davis MW, Kippes ME, Carr JE, (1995) conducted a controlled clinical trial on relaxation, imagery and cognitive behavioural training on pain during cancer treatment among 94 cancer patients in USA by using visual analogue scale. The study concluded that relaxation and guided imagery training reduces cancer treatment- related pain.

Studies related to Effectiveness of Guided Imagery on Quality of Life

Andreas Charalambous, (2011) conducted a randomized clinical trial on effect of guided imagery and progressive muscle relaxation as a means to improve the psychological well-being and the quality of life among 200 patients with breast and prostate cancer in US by using EORTC QLQ-C30 questionnaire. The study revealed that the study group demonstrated a statistically significant reduction in pain, fatigue, nausea-vomit, anxiety, depression and improve quality of life. The study concluded that guided imagery was effective in the management of pain, and improve quality of life.

Leon – Pizaro C, et. al, (2007) conducted a randomized trial on effect of training in relaxation and guided imagery techniques in improving psychological and quality of life indices among 66 gynaecologic and breast brachytherapy patients in Spain by using Hospital Anxiety and Depression Scale (HADS) and Cuestionario de Calidad de Vida QL- CA-AFex (CCV) scale. The study revealed that the study group demonstrated a statistically significant reduction in anxiety, depression and body discomfort compared with the control group. The study concluded that relaxation techniques and guided imagery improved the quality of life and psychological well being of patients with cancer.

Yoo HJ, Ahn SH, Kim SB, Kim WK, Han OS, (2005) conducted a randomised experimental study on efficacy of guided imagery and progressive muscle relaxation training in reducing chemotherapy side effects among 60 patients with breast cancer and in improving their quality of life in South Korea by using self-report Multiple Affect Adjective Check list. The study revealed that guided imagery and progressive muscle relaxation group had significantly less anxiety, depression, nausea and vomiting than the control group. The study concluded that guided imagery and progressive muscle relaxation was effective in reducing chemotherapy side effects and improving the quality of life among breast cancer patients.

CONCEPTUAL FRAMEWORK

GENERAL SYSTEM THEORY LUDWIG VON BERTANLAFFY (1968)

Conceptual framework act as building block for the research study. Conceptual framework play several interrelated roles in the progress of a science. The overall purpose is to make research findings meaningful and generalizable.

Tabot (1995) defines the conceptual framework as a "network of interrelated changes that provide a structure for organizing and describing the phenomenon of intersect". Research studies are based on theoretical or conceptual framework that facilitates visualizing the problem and placing the variables in the logical manner.

The present study aims to evaluate the effectiveness of guided imagery on pain and quality of life among patients with cancer. The conceptual framework for this study is based on modified Ludwig Von Bertanlaffy's Open System Theory (1968). System theory is being used increasingly by nurses as a way of understanding not only the biological systems but also systems in families, communities, nursing and health care.

A system is set of interacting parts or components within a boundary that interact among various components to achieve the goal. A system can be an individual, a family or a community. The fundamental components of a system are matter, energy and communication without any one of these system does not exist. The system continuously monitors self and the environment, for information to guide its own operation.

There are two types of systems

- A closed system

A closed system does not exchange energy, matter or information with its environment; it receives no output from the environment and gives no output to the environment.

- A open system

Energy, matter and information move into and out of the system through the system boundary. All living systems such as plants, animals, people, families and communities are open system, since their survival depends on a continuous exchange of energy. They are therefore, in a constant state of change. For its functioning an open system depends on the quality and quantity of its input, output and feedback.

In the present study, the concepts can be interpreted as follows

Open System:

In this present study individual is considered as open system.

Input:

The system uses the input through self regulation to maintain the system's equilibrium or homeostasis. Input consists of information, material or energy that enter the system.

In this study, input is guided imagery followed by pre-test assessment of pain and quality of life.

Throughput:

Input is processed in a way useful to the system. This process of transformation is called throughput.

In this study, the investigator, administer guided imagery for 20 minutes for twice a day of 5 consecutive days with routine nursing care.

Output:

The system returns the output following the process of input.

Output is reduction in level of pain and improvement in quality of life which is reassess by using Standardised Verbal Descriptor Pain Assessment scale and modified EORTC QLQ – C30 scale.

Feedback:

It emphasis to strengthen the input and throughput, it is necessary if the output shows reduction in level of pain and improvement in quality of life.

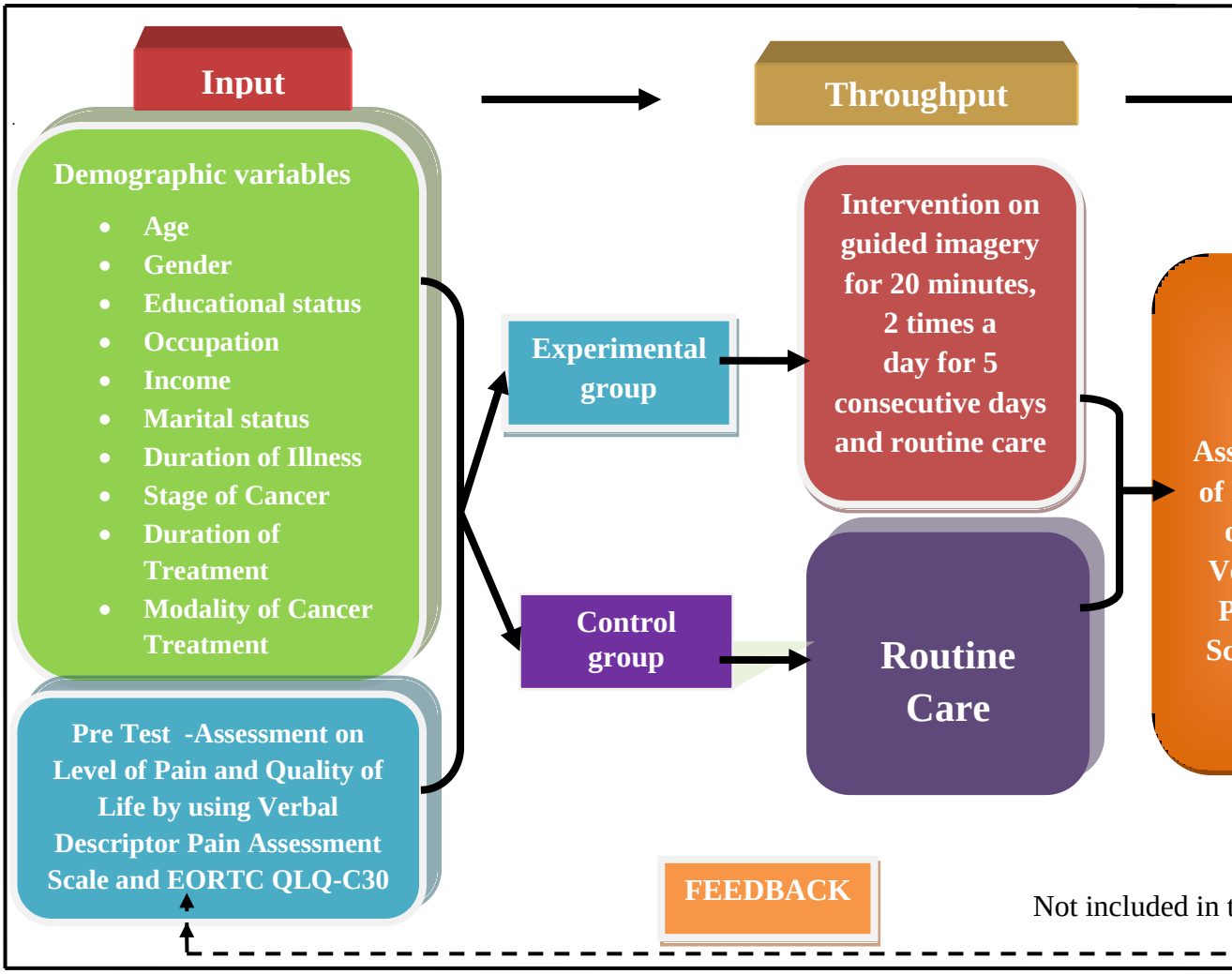

Fig -1: Conceptual Framework Based On Modified Ludwig Von Bertanlaffy's Open System Theory (1968)

CHAPTER III

METHODOLOGY

According to Basavanthappa B.T (2004) “research methodology is a way to systematically solve the research problem”

According to Denise F. Polit (2011) methodology is defined as “the steps, procedures and strategies for gathering and analyzing data”.

The chapter deals with research approach, research design setting of the study, population, criteria for selection of sample, sample size, sampling technique, description of tool, scoring procedure, data analysis and protection of human rights.

Research Approach

Polit and Hungler (2004) defined the approach as, “a general set of orderly disciplined procedure used to acquire information”.

In this study a quantitative evaluative approach was used to evaluate the effectiveness of guided imagery on pain and quality of life among patients with cancer.

Research Design

According to Denise F. Polit (2011) research design is defined as, "the overall plan for addressing a research question, including specifications for enhancing the study's integrity".

A quasi experimental non randomized control group design was chosen for this study to evaluate the effectiveness of Guided imagery on pain and quality of life among patients with cancer.

The diagrammatic representations of research design is as follows.

Group	Pre-test		Intervention			Post- test	
	D1		D2	D3	D4	D5	
Experimental	O1	X	X	X	X	X	O3
Control	O2	-	-	-	-	-	O4

Keys:

O1 : Pre- test assessment of pain and quality of life in experimental group.

O2 : Pre- test assessment of pain and quality of life in control group.

X : Guided imagery for 20 minutes, twice a day for 5 consecutive days.

O3 : Post test assessment of pain and quality of life in experimental group.

O4 : Post test assessment of pain and quality of life in control group.

O3–O1
O4–O2 } Effectiveness of guided imagery on pain and quality of life.
O3–O4

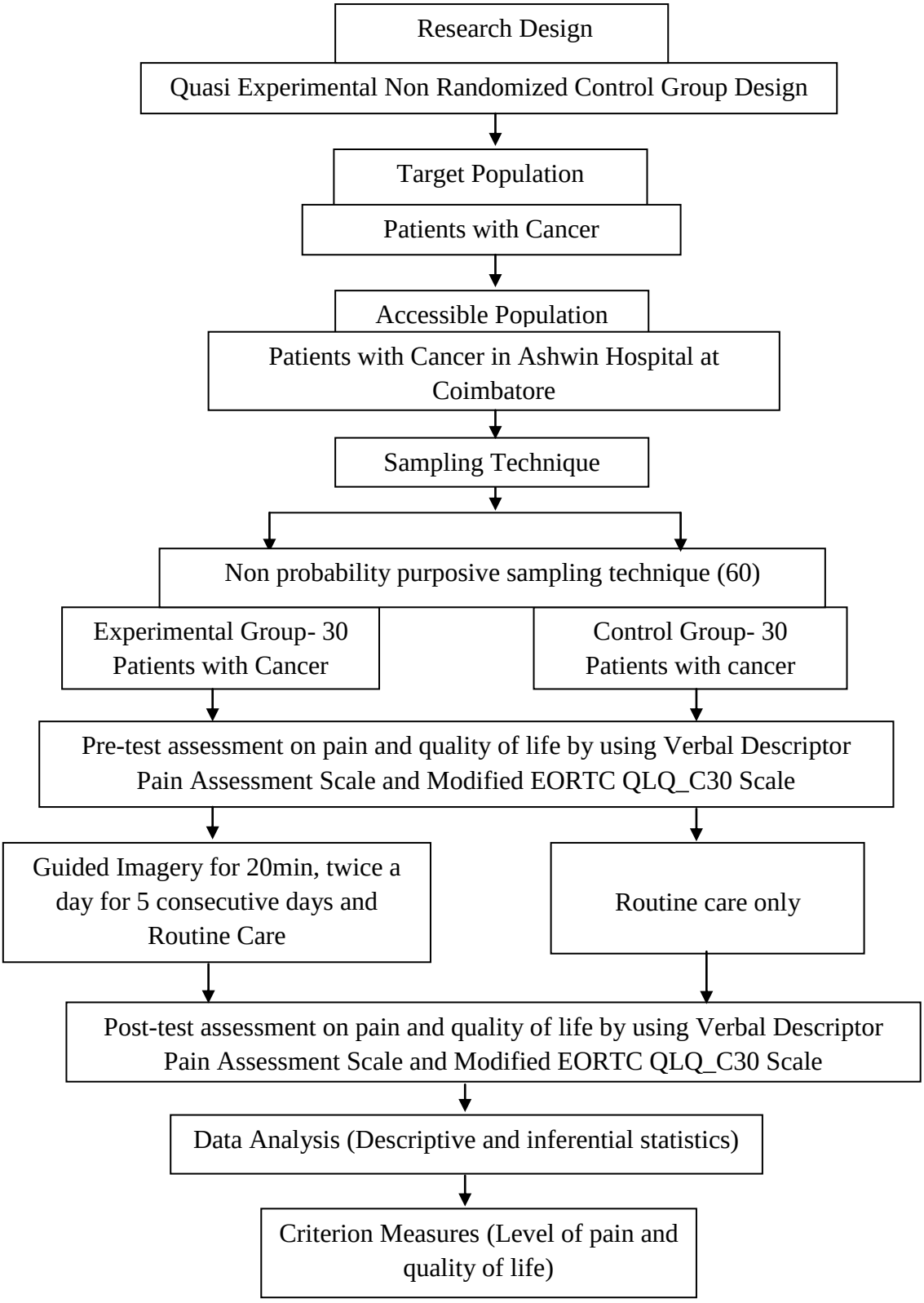

Fig. 1.Schematic Representation of Research Methodology

Variables

According to Denise F. Polit (2011) variable is defined as, “an attribute that varies, that is takes on different values”.

Dependent Variables

According to Denise F. Polit (2011) dependant variable is defined as, “the variable hypothesized to depend on or be caused by another variable of interest”. In this study the dependent variables are pain and quality of life among patients with cancer.

Independent Variable

According to Denise F. Polit (2011) independent variable is defined as, “the variable that is believed to cause or inference the dependent variable”.

In this study the independent variable is guided imagery.

Setting of the Study

The study was conducted in Ashwin Hospital at Coimbatore. This hospital has 100 beds with separate male and female ward, special ward, general ward, intensive care unit, operation theatre, post operative ward, chemotherapy and radiation therapy unit, laboratory and pharmacy department.

In this study the researcher has selected the samples from special ward, male and female ward. In the out-patient the attendance per month was approximately 600. The average inpatient census is 90-96% per month.

Population

According the Denise F. Polit (2011) population is defined as, “the entire set of individuals or objects having some common characteristics”.

The target population is determined by the sampling criteria. An accessible population is the portion of the target population to which the researcher has reasonable access. The target population for this study was patients with cancer.

The accessible population for this study includes patients with cancer admitted in Ashwin hospital at Coimbatore.

Sample

According to Denise F. Polit (2011) sample is defined as, “a subset of a population comprising those selected to participate in a study”.

The samples were selected patients with cancer from Ashwin Hospital at Coimbatore.

Sample Size

According to Denise F. Polit (2011) sample size is defined as, ”the number of people who participate in a study”.

The total sample size for the study was 60 patients with cancer admitted in Ashwin Hospital at Coimbatore. 30 samples were assigned to each in experimental and control group.

Criteria for Sample Selection

Inclusion Criteria

Patients who are diagnosed with cancer

1. Patients at any stage of cancer
2. Those who are able to understand Tamil
3. Those who are willing to participate in the study
4. Those with mild and moderate level of pain

Exclusion Criteria

1. Critically ill patients.
2. Unconscious and terminally ill patients.
3. Mentally ill patients.
4. Those who have brain tumor and underwent surgery in the brain or skull.
5. Those who have neurological and sensory deficit.

Sampling Technique

According to Suresh K Sharma (2007) sampling technique is defined as, "the process of selecting a representative segment of the population under study.

Non probability purposive sampling technique was used for this study. According to inclusion criteria and exclusion criteria, 30 patients for experimental group and 30 patients for control group were selected for this study.

Development of the Tool

Treece and Treece (1986) emphasized that "the instrument selected in research should as far as possible be the vehicle that would best obtain data for drawing conclusion".

The research tool was developed in English after an extensive review of literature and experts opinion. It was translated into Tamil by language experts. The Standardised Verbal Descriptor Pain Assessment scale and modified EORTC QLQ – C30 scale was used as the instrument to measure the level of pain and quality of life.

Description of the Tool

The Standardised Verbal Descriptor Pain Assessment scale and modified EORTC QLQ – C30 scale and used to assess the pain and quality of life respectively.

The tool consists of three parts.

Part I:

It includes demographic variables of patients with cancer (age, gender, educational status, occupation, monthly income, marital status, duration of illness, stage of cancer, duration of treatment, modality of cancer treatment).

Part II:

It consists of Standardised Verbal Descriptor Pain Assessment Scale to evaluate the pain.

This scale used for patient self-assessment of pain. It consists of '0' to '7' score that measure level of pain, that ranges from no pain to moderate pain

Part III

This includes modified EORTC QLQ – C30 scale to evaluate the quality of life.

The modified EORTC QLQ- C30 scale consist of 28 statements in 4 point likert scale to measure for dimensions of subjective quality of life. The dimensions include physical 20 items (# 1- 20); emotional 5 items (#21-25); social 2 items (#26-27);financial 1 item (#28) to calculate the four subscale/ dimensions and the quality of life.

The minimum possible score for each statement is '1' and the maximum possible score for each statement is '4'.

Scoring Procedures

Part II:

Regarding Standardized Verbal Descriptor Pain Assessment Scale, it consists of 0-7 score that measure level of pain and ranges from no pain to moderate pain.

The scores are classified as,

0 - No Pain

1-2 - Mild Pain

3-7 - Moderate Pain

Part III:

Regarding modified EORTC QLQ- C30 scale, it consists of 28 items for assessing quality of life. The total maximum possible score is '112' and minimum possible score is '28'.

The scores are as follows,

28-49	----	Good quality of life
50-91	----	Moderate quality of life
92-112	----	Poor quality of life

Guided Imagery

Guided imagery is the relaxation technique, by using audio and video script regarding forest scenes for 20 minutes, twice a day for 5 consecutive days.

Content Validity

According to Suresh K Sharma (2007) validity is defined as, "extent to which an instrument accurately reflects the abstract construct (or) concept being examined".

To ensure the study, the content validity tool was obtained from one medical expert from oncology department and one from a Psychologist and five experts from Medical Surgical Nursing department. Based on the expert opinion the tool and demographic variables are modified.

Reliability

According to Denise F. Polit (2011) reliability is defined as, "the degree of consistency or dependability with which an instrument measures an attribute".

The reliability was assessed by using test retest method r=0.89 hence it was highly reliable and used in this study.

Pilot Study

According to Denise F. Polit (2011) pilot study is defined as, "a small-scale version or trial run, done in preparation of a major study".

In order to check the feasibility and practicability, pilot study was conducted among 10 patients with cancer in Guru Hospital, advanced cancer care at Madurai after obtaining the written permission. The pilot study revealed that it was feasible and practicable to conduct the main study

Data Collection Procedure

The data collection procedure was done for a period of 6 weeks in oncology wards of Ashwin Hospital at Coimbatore. Permission to conduct the study was obtained from the Dean, Head of the Department and consultant Oncologist, unit in-charge of oncology ward. The study subjects were informed by the investigator regarding nature and purpose of the study. Informed written consent was obtained from the subjects as per rule on the 1st day. On the same day pre-test was conducted through structured interview technique by using Standardised Verbal Descriptor Pain scale to assess the level of pain and modified EORTC QLQ- C30 scale to assess the quality of life among patients with cancer in both experimental and control group.

On Day1, 2, 3, 4 and 5 guided imagery technique for 20 minutes, twice day for 5 consecutive days was administered to the experimental group only and the control group received the routine care. On Day5 post test was conducted by using the same questionnaires to assess the level of pain and quality of life among patients with cancer in both experimental and control group.

Plan for Data Analysis

The demographic variables were analyzed by using descriptive statistics (frequency and percentage).The level of pain and quality of life was analyzed by using descriptive statistics (Mean, standard deviation).The effectiveness of guided imagery on pain and quality of life was analyzed by using inferential statistics (dependent 't' test and independent 't' test). Relationship between the level of pain and quality of life was analyzed by using Karl Pearson's correlation co efficient (r). Association between the level of pain and quality of life among patients with cancer and their selected demographic variables was assessed by using chi- square analysis.

Protection of Human Rights

The study was conducted after the approval of research committee of the Institution. The nature and purpose of the study was explained to participants of the study. Informed written consent was obtained from all study participants. Anonymity and confidentiality was maintained throughout the study. Guided imagery technique was administered and taught to the control group after the post test to overcome the ethical issue.

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with analysis and interpretation of data collected from 60 patients with cancer in order to evaluate the effectiveness of guided imagery on quality of life and pain.

Denise F Polit (2011) defined analysis as, “the process of organizing and synthesizing data so as to answers research questions and test hypothesis”.

Denise F Polit (2011) defined data as, “the piece of information obtained in a study”.

The study findings are presented in sections as follows.

Section I : Data on demographic variables of patients with cancer.

Section II : Data on level of pain among patients with cancer.

Section III : Data on quality of life among patients with cancer.

Section IV : Data on effectiveness of guided imagery on level of pain among patients with cancer.

Section V : Data on effectiveness of guided imagery on quality of life among patients with cancer.

Section VI : Data on relationship between level of pain and quality of life among patients with cancer.

Section VII : Data on association between level of pain and quality of life among patients with cancer and their selected demographic variables.

SECTION I : DATA ON DEMOGRAPHIC VARIABLES OF PATIENTS WITH CANCER.

Table: 1

Frequency and Percentage Distribution of Patients with Cancer According to their selected Demographic Variables in Experimental and Control Group.

N=60

S. No.	Demographic Variables	Experimental Group		Control Group		Total	
		n	%	n	%	N	%
1	Age (in years)						
	a) 20 -35 years	0	0	1	3	1	1
	b) 36-50 years	11	37	14	47	25	42
	c) 51-65 years	19	63	15	50	34	57
2	Gender						
	a) Male	12	40	15	50	27	45
	b) Female	18	60	15	50	33	55
3	Educational status						
	a) No formal education	21	70	22	73	43	72
	b) Primary education	8	27	8	27	16	27
	c) Secondary education	1	3	0	0	1	1
	d) Higher education	0	0	0	0	0	0
	e) Graduate/Equivalent	0	0	0	0	0	0
4	Occupation						
	a) Self employed	29	97	29	97	58	97
	b) Private employee	1	3	1	3	2	3
	c) Government employee	0	0	0	0	0	0
	d) Unemployed	0	0	0	0	0	0

(Contd...)

S. No.	Demographic Variables	Experimental Group		Control Group		Total	
		n	%	n	%	N	%
5.	Monthly Income						
	a) Rs. 5,000/- -Rs, 10,000/-	25	83	27	90	52	87
	b) Rs. 10,001/- -Rs. 15,000/-	5	17	3	10	8	13
	c) Above Rs.15,000/-	0	0	0	0	0	0
6.	Marital status						
	a) Married	23	77	25	83	48	80
	b) Unmarried	0	0	0	0	0	0
	c) Divorced/separated	0	0	0	0	0	0
	d) Widow/ Widower	7	23	5	17	12	20
7.	Duration of Illness						
	a) < 1 year	28	94	28	94	56	93
	b) 1-3 years	1	3	2	6	3	5
	c) > 3 years	1	3	0	0	1	2
8.	Stage of Cancer						
	a) 1^{st} stage	5	17	1	3	6	10
	b) 2^{nd} stage	17	57	25	84	42	70
	c) 3^{rd} stage	7	23	4	13	11	18
	d) 4^{th} stage	1	3	0	0	1	2
9.	Duration of treatment						
	a) Less than 1 year	30	100	30	100	60	100
	b) 1- 3 years	0	0	0	0	0	0
	c) More than 3 years	0	0	0	0	0	0
10.	Modality of Cancer treatment						
	a) Chemotherapy	8	27	13	43	21	35
	b) Radiation therapy	12	40	9	30	21	35
	c) Both	10	33	8	27	18	30
	d) Surgery therapy	0	0	0	0	0	0

Table 1 reveals that regarding age, majority of the cancer patients 34 (51%), belonged to 51-65 years, out of them 19 (63%) belonged to experimental group and 15 (50%) belonged to control group respectively. 25 (42%) patients were included in the age group of 36-50 years among them 11 (37%) and 14 (47%) belonged to experimental and control group respectively, 1 (1%) belonged to the age group of 20-35 years among them 1 (3%) belonged to control group.

Regarding gender, majority 33 (55%) were females among them 18(60%) were included in experimental group and 15 (50%) were included in control group. 27(45%) were males among them 12(40%) belonged to experimental group and 15 (50%) belonged to control group.

Regarding educational status, 43 (72%) had no formal education, out of them 21 (70%) and 22 (73%) belonged to experimental and control group respectively. 16 (27%) had primary education out of them 8 (27%) and 8 (27%) belonged to experimental and control group respectively. 1 (1%) had secondary education among them 1 (3%) belonged to experimental group.

Regarding occupation, 58 (97%) were self employed out of them 29 (97%) belonged to experimental and 29 (97%) belonged to control group. 2 (3%) were private employee out of them 1 (3%) belonged to experimental and 1 (3%) belonged to control group.

Regarding monthly income, 52 (87%) were included in the category of Rs.5000/-Rs.10000/- among them 25 (83%) and 27 (90%) belonged to experimental

and control group. 8 (13%) were included in the category of Rs. 10001/- – Rs.15000/- among them 5 (17%) and 3 (10%) belonged to experimental and control group respectively.

Regarding marital status, 48 (80%) were married among them 23 (77%) and 25 (83%) belonged to experimental and control group. 12 (20%) were widow / widower among them 7 (23%) and 5 (17%) belonged to experimental and control group.

Regarding duration of illness, 56 (93%) were involved in the category of < 1 year out of them all 28 (94%) belonged to experimental and control group. 3 (5%) were involved in the category of 1-3 years among them 1 (3%) and 2 (6%) belonged to experimental and control group. 1 (2%) were involved in the category of > 3 years among them 1 (3%) belonged to experimental group.

Regarding stage of cancer, 6 (10%) were in 1^{st} stage, out of them 5 (17%) and 1 (3%) belonged to experimental and control group. 42 (70%) were in 2^{nd} stage, out of them 17 (57%) and 25 (84%) belonged to experimental and control group. 11 (18%) were in 3^{rd} stage, out of them 7 (23%) and 4 (13%) belonged to experimental and control group. 1 (2%) were in 4^{th} stage among them 1 (3%) belonged to experimental group.

Regarding duration of treatment, all 60 (100%) were involved in the category of less than 1 year.

Regarding modality of cancer treatment, 21 (35%) underwent chemotherapy out of them 8 (27%) and 13 (43%) belonged to experimental and control group. 21 (35%) underwent radiation therapy out of them 12 (40%) and 9 (30%) belonged to experimental and control group. 18 (30%) had both chemotherapy and radiation therapy out of them, 10 (33%) and 8 (27%) belonged to experimental and control group.

It was inferred that, majority of cancer patients belonged to the age group of 51-65 years, were females, had no formal education, self employed, earned a monthly income of Rs.5000/- -Rs.10000/-, married, having the illness for less than 1 year, were in second stage of cancer, having treatment for less than 1 year, and undergoing chemotherapy and radiation therapy.

SECTION II : DATA ON LEVEL OF PAIN AMONG PATIENTS WITH CANCER.

Table: 2

Frequency and Percentage Distribution on Level of Pain among Patients with Cancer in Experimental and Control Group.

N=60

S. No.	Level Of Pain	Experimental Group				Control Group			
		Pre Test		Post Test		Pre Test		Post Test	
		n	%	n	%	n	%	n	%
1.	No Pain	0	0	13	43	0	0	0	0
2.	Mild	0	0	17	57	0	0	0	0
3.	Moderate	30	100	0	0	30	100	30	100

The above table 2 shows the level of pain in the experimental and control group among patients with cancer.

Out of 30 subjects among experimental group all 30(100%) of them had moderate level of pain during pre-test. Whereas in the post-test assessment 13 (43%) of them had no pain, 17 (57%) of them had mild level of pain. Out of 30 subjects in the control group, 30(100%) of them had moderate level of pain in their pre-test assessment. Whereas in the post-test assessment also, all 30(100%) had moderate level of pain.

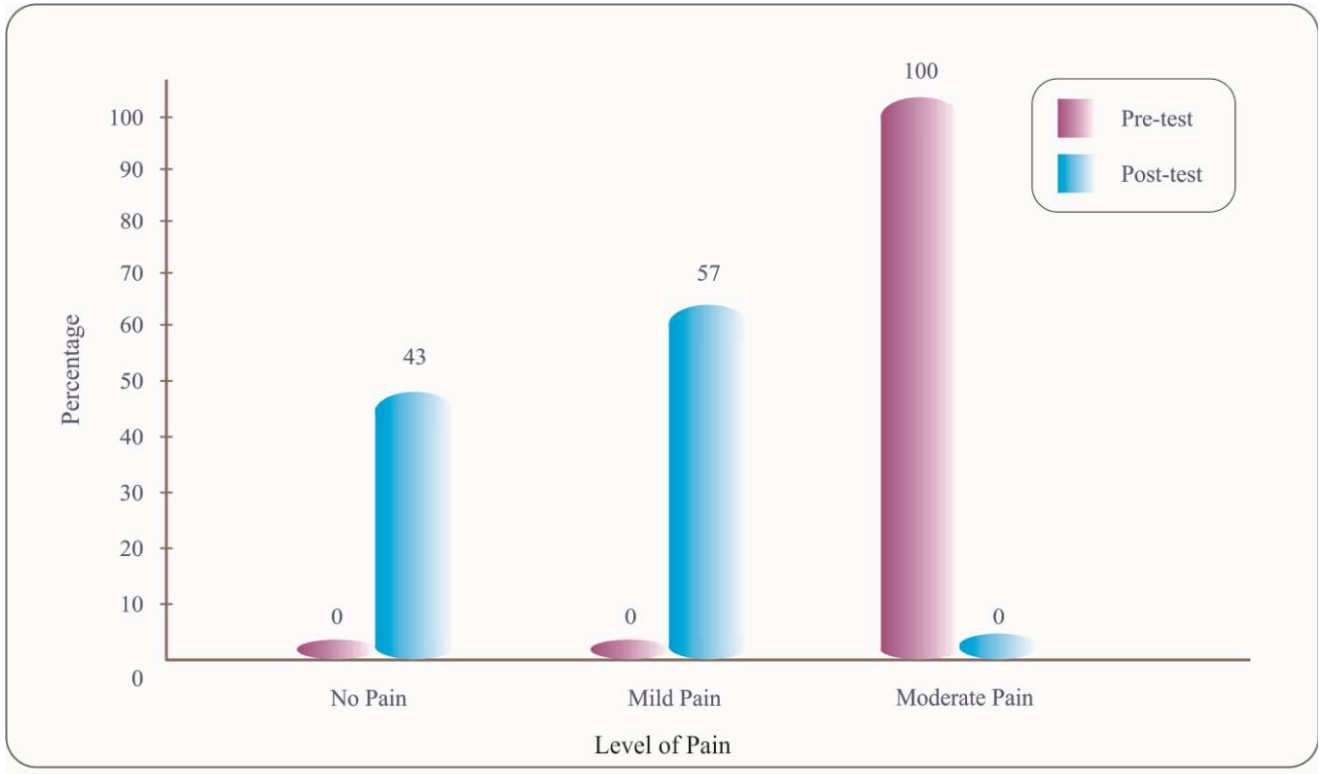

Fig 3 : Level of Pain among Patients with Cancer in Experimental Group.

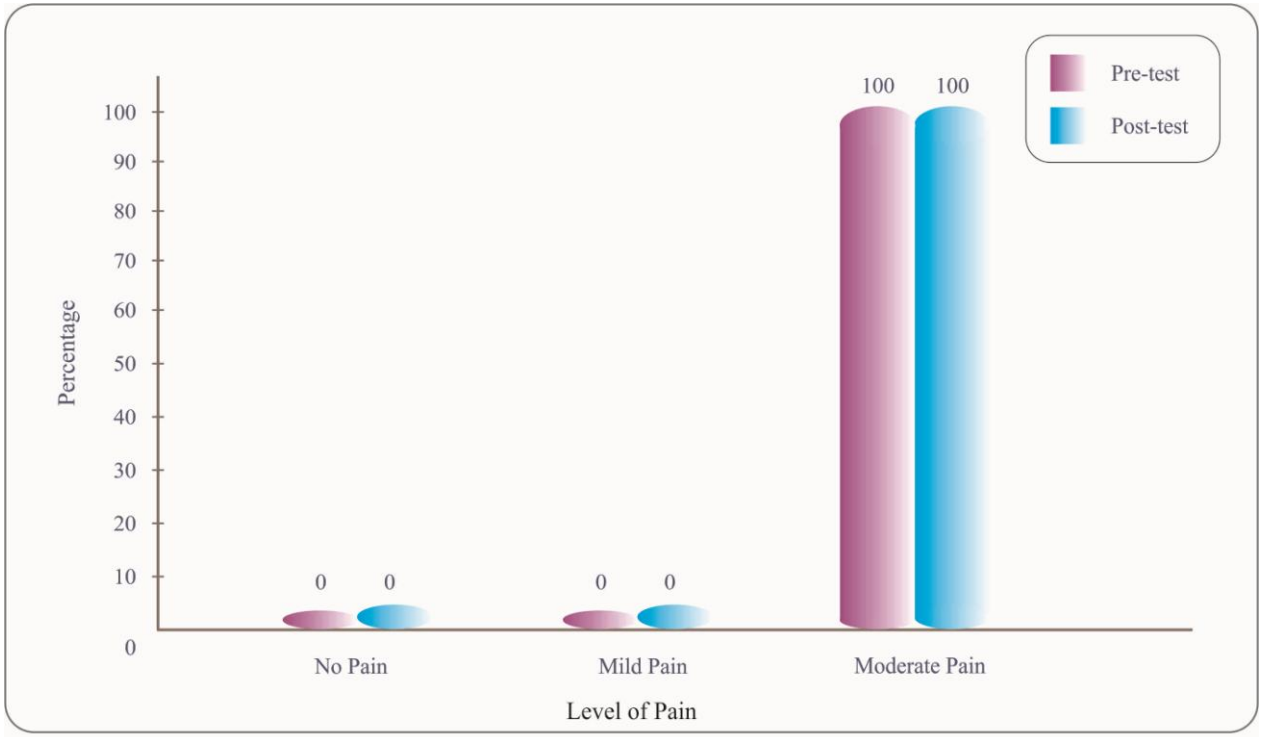

Fig 4 : Level of Pain among Patients with Cancer in Control Group.

Table: 3

Frequency and Percentage Distribution on Quality of Life among

Patients with Cancer in Experimental and Control Group.

N=60

S. No.	Quality of Life	Experimental Group				Control Group			
		Pre Test		Post Test		Pre Test		Post Test	
		n	%	n	%	n	%	n	%
1.	Good	0	0	26	87	0	0	0	0
2.	Moderate	21	70	4	13	18	60	22	73
3.	Poor	9	30	0	0	12	40	8	27

The above table 3 shows quality of life in the experimental and control group among patients with cancer.

Out of 30 subjects among experimental group, 21 (70%) of them had moderate quality of life, 9(30%) of them had poor quality of life in their pre-test assessment. Whereas in the post- test assessment 26 (87%) of them had good quality of life and 4(13%) of them had moderate quality of life.

Out of 30 subjects in the control group, 18(60%) of them had moderate quality of life, 12 (40%) of them had poor quality of life in their pre-test assessment. Whereas in the post-test assessment, 22 (73%) of them had moderate quality of life and 8 (27%) of them had poor quality of life.

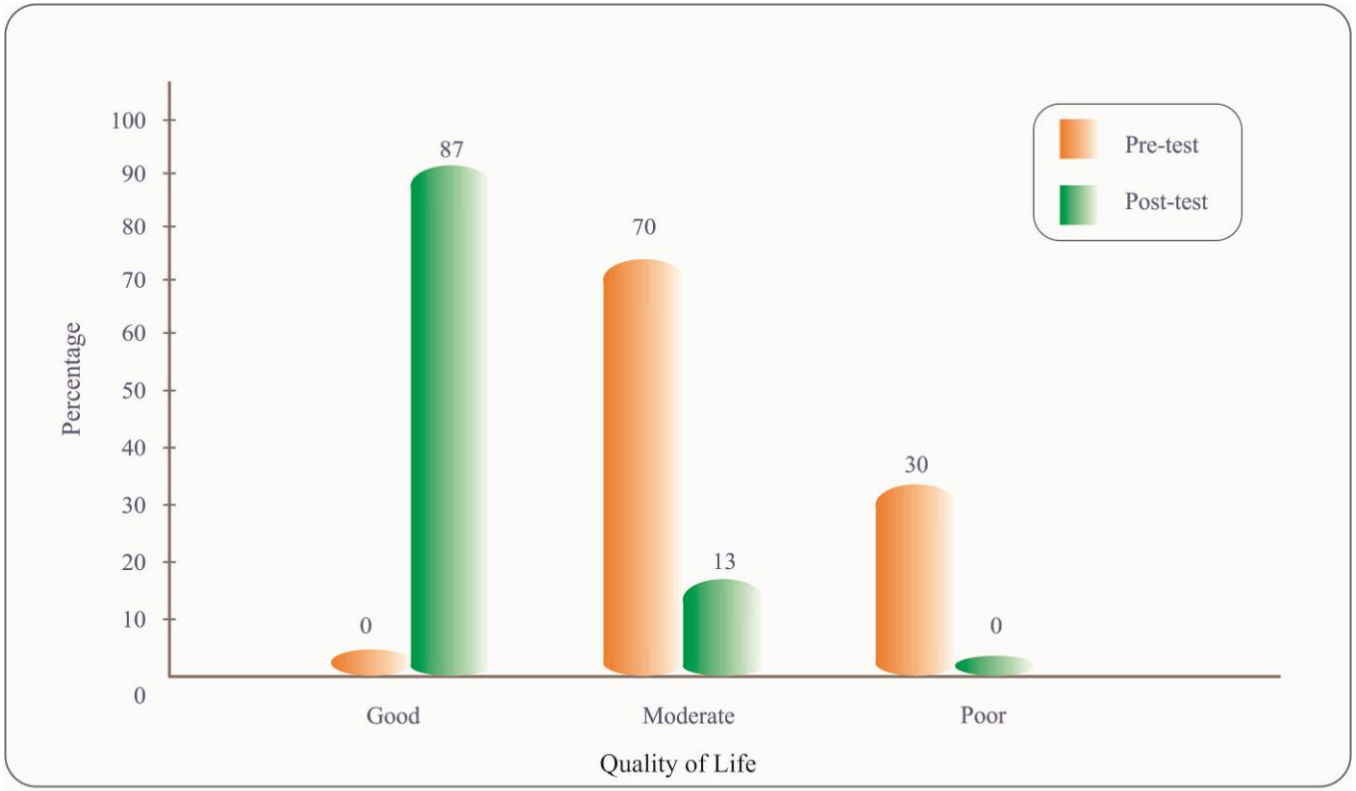

Fig 5 : Quality of Life among Patients with Cancer in Experimental Group.

Fig 6 : Quality of Life among Patients with Cancer in Control Group.

SECTION IV : DATA ON EFFECTIVENESS OF GUIDED IMAGERY ON LEVEL OF PAIN AMONG PATIENTS WITH CANCER.

Table: 4.1

Mean, Standard Deviation, Mean Difference and 't' Value on Level of Pain among Patients with Cancer in Experimental and Control Group.

N=60

S. No	Group	Mean	SD	MD	't' value
	Experimental Group				
1	Pre test	5	1.15		
2	Post test	0.66	0.64	4.34	19.25*
	Control Group				
1	Pre test	5.26	0.84		
2	Post test	5.2	0.79	0.06	0.34^{NS}

* - Significant at $p < 0.05$ level.

Table 4.1 reveals that among experimental group the mean pre-test score was 5 with standard deviation 1.15. The mean post- test was 0.66 with standard deviation 0.64. The mean difference was 4.34. The obtained 't' value was 19.25, whereas the table value was 2.045. It was significant at $p<0.05$ level.

Among control group the mean pre-test score was 5.26 with standard deviation with 0.84. The mean post-test was 5.2 with standard deviation with 0.79. The mean difference was 0.06. The obtained 't' value 0.34, was not significant.

Hence, the stated hypothesis was accepted. It is inferred that guided imagery is effective in reducing level of pain among patients with cancer.

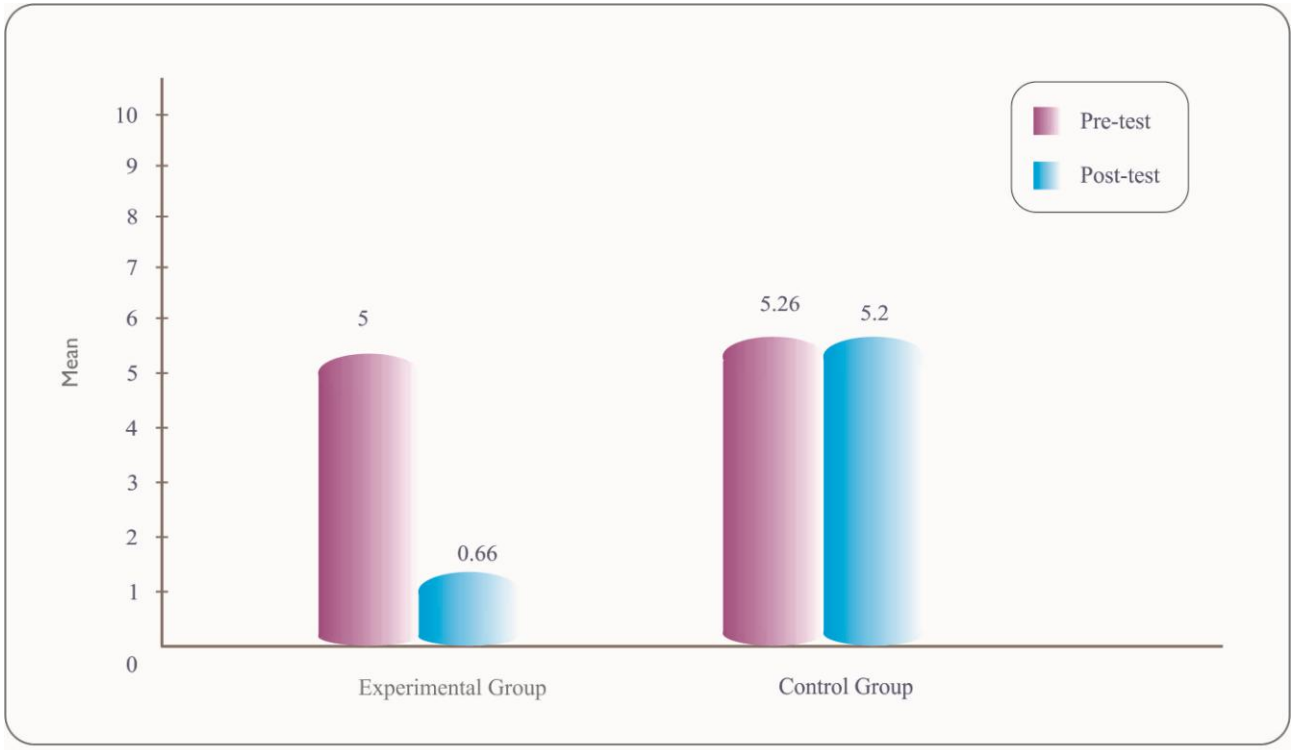

Fig 7 : Mean Value on Level of Pain
among Patients with Cancer in Experimental and Control Group.

Table : 4.2

Mean, Standard Deviation, Mean Difference and 't' Value on Quality of Life among Patients with Cancer in Experimental and Control Group.

N=60

S. No	Group	Mean	SD	MD	't' value
	Experimental Group				
1	Pre test	90.56	3.3		
2	Post test	42.8	6.1	47.76	4.11*
	Control Group				
1	Pre test	89.7	4.02		
2	Post test	89.1	3.93	0.54	1.52^{NS}

* - Significant at $p < 0.05$ level.

Table 4.2 shows that among experimental group the mean pre-test score was 90.56 with standard deviation 3.3. The mean post- test was 42.8 with standard deviation 6.1. The mean difference was 47.76. The obtained 't' value was 4.11, whereas the table value was 2.045. It was significant at $p<0.05$ level.

Among control group the mean pre-test score was 89.7 with standard deviation with 4.02. The mean post- test score was 89.1 with standard deviation 3.93. The mean difference was 0.54. The obtained 't' value 1.52 was not significant.

Hence the stated hypothesis was accepted. It is inferred that guided imagery is effective in improving quality of life among patients with cancer.

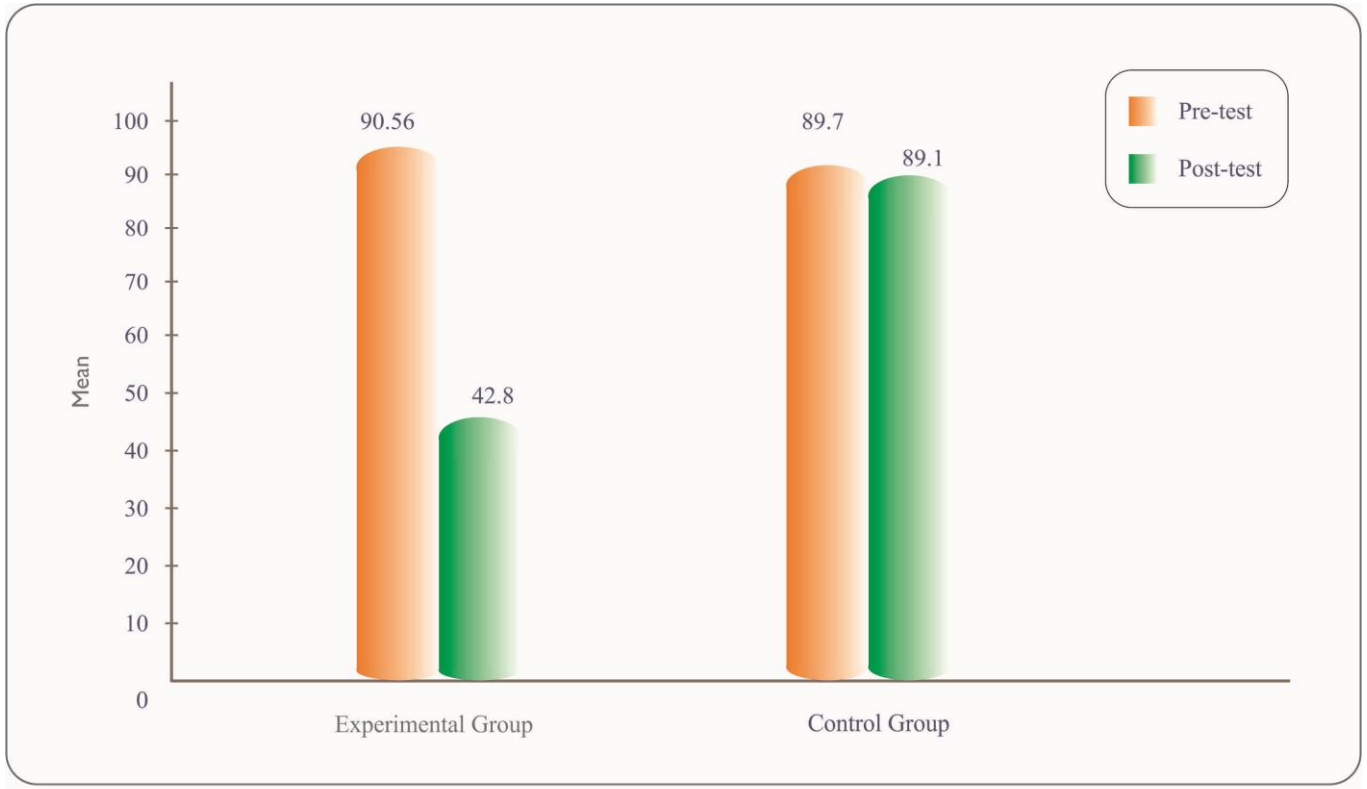

Fig 8 : Mean Value on Quality of Life
among Patients with Cancer in Experimental and Control Group.

SECTION V: DATA ON RELATIONSHIP BETWEEN LEVEL OF PAIN AND QUALITY OF LIFE AMONG PATIENTS WITH CANCER.

Table: 5

Mean, Standard Deviation and 'r' Value on Post-test Score of level of Pain and Quality of Life among Patients with Cancer in Experimental Group.

N=30

S. No.	Groups	Pain		Quality of Life		'r' Value
		Mean	SD	Mean	SD	
1	Experimental Group Post-test	0.66	0.64	42.8	6.1	-0.37

Table 5 shows the relationship between level of pain and quality of life among patients with cancer in post-test. Among experimental group the mean post-test score of pain was 0.66 with standard deviation 0.64 and mean post-test score of quality of life was 42.8 with standard deviation 6.1. The obtained 'r' value was -0.37 which is statistically significant.

Hence, the stated hypothesis was accepted. It is inferred that there is a significant relationship between level of pain and quality of life among patients with cancer.

SECTION VI : DATA ON ASSOCIATION BETWEEN LEVEL OF PAIN AMONG PATIENTS WITH CANCER WITH THEIR SELECTED DEMOGRAPHIC VARIABLES.

Table : 6

Frequency, Percentage and χ^2 Distribution on Level of Pain among Patients with Cancer with their selected Demographic Variables in Experimental Group.

N=30

S. No.	Demographic Variable	Level of Pain				χ^2 Value
		No Pain		Mild		
		n	%	n	%	
1	Age in years					
	a. 20-35	0	0	0	0	0.01^{NS}
	b. 36-50	5	16	6	20	df=4
	c. 51-65	8	27	11	37	
2	Gender					
	a. Male	2	7	10	33	5.77^{NS}
	b. Female	11	37	7	23	df=2
3	Educational status					
	a. No formal education	11	37	10	33	2.51^{NS}
	b. Primary education	2	7	6	20	df=8
	c. Secondary education	0	0	1	3	
4	Occupation					
	a. Self employed	13	43	16	54	0.76^{NS}
	b. Private employee	0	0	1	3	df=4

(Contd.,)

S. No.	Demographic Variable	Level of Pain				χ^2 Value
		No Pain		Mild		
		n	%	n	%	
5	Monthly income					
	a. Rs.5000 /–Rs.10000/-	13	43	12	40	4.56 NS
	b. Rs.10001/-Rs.15000/-	0	0	5	17	df=4
6	Marital status					
	a. Married	11	37	12	40	0.79 NS
	b. Widow / widower	2	7	5	16	df=4
7	Duration of illness					
	a. < 1 year	12	40	16	54	2.03 NS
	b. 1-3 years	0	0	1	3	df=4
	c. > 3 years	1	3	0	0	
8	Stage of cancer					
	a. 1st stage	1	3	4	14	2.48 NS
	b. 2nd stage	8	26	9	30	df=4
	c. 3rd stage	3	10	4	14	
	d. 4th stage	1	3	0	0	
9	Duration of treatment					
	a. Less than 1 year	13	43	17	57	0 NS
						df=4
10	Modality of cancer treatment					
	a. Chemotherapy	4	14	4	14	0.17 NS
	b. Radiation therapy	5	16	7	22	df=6
	c. Both	4	14	6	20	

NS – Non Significant

Table 6 inferred that there was no significant association between level of pain and their selected demographic variables such as age, gender, educational status, occupation, income, marital status, duration of illness, stage of cancer, duration of treatment, modality of cancer treatment both in experimental and control group.

SECTION VII : DATA ON ASSOCIATION BETWEEN QUALITY OF LIFE AMONG PATIENTS WITH CANCER WITH THEIR SELECTED DEMOGRAPHIC VARIABLES.

Table : 7.1

Frequency, Percentage and χ^2 Distribution on Quality of Life among Patients with Cancer with their Selected Demographic Variables in Experimental Group.

N=30

S. No.	Demographic Variable	Quality of Life				χ^2 Value
		Good		Moderate		
		n	%	n	%	
1	Age in years					
	a. 20-35	0	0	0	0	2.92 NS
	b. 36-50	8	27	3	10	df=4
	c. 51-65	18	60	1	3	
2	Gender					
	a. Male	12	40	0	0	3.06 NS
	b. Female	14	46	4	14	df=2
3	Educational Status					
	a. No formal education	19	63	2	7	8.04 NS
	b. Primary education	6	20	2	7	df=8
	c. Secondary education	1	3	0	0	
4	Occupation					
	a. Self employed	25	83	4	14	0.08 NS
	b. Private employee	1	3	0	0	df=6

(Contd.,)

S. No.	Demographic Variable	Quality of Life				χ^2 Value
		Good		Moderate		
		n	%	n	%	
5	Monthly income					
	a. Rs.5000/- – Rs.10000/-	21	70	4	14	0.8 ^{NS}
	b. Rs.10001/--Rs.15000/-	5	16	0	0	df=4
6	Marital status					
	a. Married	20	67	3	10	0 ^{NS}
	b. Widow / widower	6	20	1	3	df=6
7	Duration of illness					
	a. < 1 year	24	80	4	14	0.17 ^{NS}
	b. 1-3 years	1	3	0	0	df=4
	c. > 3 years	1	3	0	0	
8	Stage of cancer					
	a. 1st stage	5	16	0	0	1.09 ^{NS}
	b. 2nd stage	14	47	3	10	df=6
	c. 3rd stage	6	20	1	3	
	d. 4th stage	1	3	0	0	
9	Duration of treatment					
	a. Less than 1 year	26	86	4	14	0 ^{NS}
						df=4
10	Modality of cancer treatment					
	a. Chemotherapy	6	20	2	7	2.57 ^{NS}
	b. Radiation therapy	10	33	2	7	df=6
	c. Both	10	33	0	0	

NS – Non Significant

Table: 7.2

Frequency, Percentage and χ^2 Distribution on quality of life among Patients with Cancer with their selected Demographic Variables in Control Group.

N=30

S. No.	Demographic Variable	Quality of Life				χ^2 Value
		Moderate		Poor		
		n	%	n	%	
1	Age in years					
	a. 20-35	1	3	0	0	0.85 NS
	b. 36-50	11	37	3	10	df=4
	c. 51-65	10	33	5	17	
2	Gender					
	a. Male	10	33	5	17	0.68 NS
	b. Female	12	40	3	10	df=2
3	Educational Status					
	a. No formal education	17	57	5	17	0.32 NS
	b. Primary education	5	17	3	10	df=8
4	Occupation					
	a. Self employee	22	74	7	23	2.87 NS
	b. Private employee	0	0	1	3	df=6
5	Monthly income					
	a. Rs.5000/- – Rs.10000/-	21	70	6	20	2.72 NS
	b. Rs.10001/- -Rs.15000/-	1	3	2	7	df=4

(Contd.,)

S. No.	Demographic Variable	Quality of Life				χ^2 Value
		Moderate		Poor		
		n	%	n	%	
6	Marital status					
	a. Married	19	63	6	20	0.52 ^{NS}
	b. Widow / widower	3	10	2	7	df=6
7	Duration of illness					
	a. < 1 year	20	67	8	27	0.75 ^{NS}
	b. 1-3 years	2	7	0	0	df=4
8	Stage of cancer					
	a. 1st stage	15	50	1	3	9.11 ^{NS}
	b. 2nd stage	6	20	4	14	df=6
	c. 3rd stage	1	3	3	10	
9	Duration of treatment					
	a. Less than 1 year	22	73	8	27	0 ^{NS}
						df=4
10	Modality of cancer treatment					
	a. Chemotherapy					
	b. Radiation therapy	11	37	2	6	
	c. Both	7	23	2	6	3.12 ^{NS}
		4	14	4	14	df=6

NS – Non Significant

Table 7.1 and 7.2 inferred that there is no significant association between quality of life and their selected demographic variables such as age, gender, educational status, occupation, income, marital status, duration of illness, stage of cancer, duration of treatment, modality of cancer treatment both in experimental and control group.

CHAPTER V

DISCUSSION

The main aim of this study was to evaluate the effectiveness of guided imagery on pain and quality of life among patients with cancer at Coimbatore.

The study was conducted by using a quasi experimental non randomised control group design. Samples were selected from the unit of oncology ward in Ashwin hospital for conducting the study. The samples size was 60, among them 30 were in experimental group and 30 were in control group.

The structured interview questionnaire was used to assess the demographic variables among patients with cancer. Pain was assessed by using Standardized Verbal Descriptor Pain Assessment scale. Quality of life was assessed by using modified EORTC QLQ – C30 scale. The responses were analyzed by using descriptive statistics (mean, frequency, percentage and standard deviation) and inferential statistics (paired 't' test, independent 't' test and Karl Pearson's Coefficient, Chi-square test). Discussions on the findings were arranged based on objectives of the study.

The first objective was to assess the pre and post test level of pain among patients with cancer in experimental and control group. The study revealed that among experimental group and control group all 30 (100%) patients had moderate pain in the assessment of pre-test level of pain whereas in the post-test, majority 17

(57%) patients had mild pain, 13 (43%) patients had no pain. Among control group, all 30 (100%) of them had moderate pain during pre and post-test. Among experimental group in comparison with control group, has shown a reduction of pain from mild 17 (57%) and no 13 (43%) level of pain.

The finding was supported by Ann Oncol, (2007) conducted a meta analysis study on prevalence of pain among patients with cancer. The study revealed that pooled prevalence of pain was in all type of cancer and highest prevalence in head and neck cancer patients. The study concluded that cancer pain still is a major problem across the country.

The second objective of the study was to assess the pre and post test quality of life among patients with cancer. Among experimental group, majority 21 (70%) patients had moderate quality of life, 9 (30%) patients had poor quality of life in pre-test whereas in the post-test majority 26 (87%) patients had good quality of life, 4 (13%) patients had moderate quality of life. Among control group, majority 18 (60%) patients had moderate quality of life, 12 (40%) patients had poor quality of life in pre–test whereas in the post-test majority 22 (73%) patients had moderate quality of life, 8 (27%) patients had poor quality of life. Among experimental group comparison with control group, has shown improvement in quality of life from moderate 4 (13%) to 26 (87%) good quality of life.

The finding was supported by Duraipandi Arunachalam, Ammapattian Thirumoorthy, Saraswathi Devi and Thennarasu, (2011) conducted a study on quality of life among 120 patients with disfigurement due to cancer and its treatments in

South India. The study revealed that majority of patients experienced poor quality of life in all dimensions like physical health, psychological health, social relationship, environmental health and other socio demographic variables.

The third objective of this study was to evaluate the effectiveness of guided imagery on pain and quality of life among patients with cancer. In experimental group pre-test mean score on pain was 5 with standard deviation 1.15 whereas in the post-test, mean score on pain was 0.66 with standard deviation 0.64 and mean difference was 4.34. The obtained 't' value 19.25 was significant at $p < 0.05$ level. Among control group the mean pre-test score was 5.26 with standard deviation with 0.84. The mean post-test was 5.2 with standard deviation with 0.79. The mean difference was 0.06. The obtained 't' value 0.34 was not significant.

The pre-test mean score on quality of life was 90.56 with standard deviation 3.3 whereas in the post-test mean score quality of life was 42.8 with standard deviation 6.1 and mean difference was 47.76. The obtained 't' value 4.11 was significant at $p < 0.05$ level. Among control group the mean pre-test score was 89.7 with standard deviation with 4.02. The mean post- test score was 89.1 with standard deviation 3.93. The mean difference was 0.54. The obtained 't' value 1.52 was not significant. Among experimental group, the mean post-test score of level of pain and quality of life score was less than the mean pre-test score of level of pain and quality of life.

Hence, the stated hypothesis H1,H2 was accepted. The study findings revealed that there was a significant difference between mean pre and post level of

pain and quality of life among patients with cancer. Thus it was concluded that guided imagery was effective in reduction of pain and improving the quality of life among patients with cancer.

The study findings are supported by Vasantha G, Almeida Victoria D, Kanagaraj R, (2013) conducted a experimental study effectiveness of guided imagery on intensity of pain and quality of life among 30 patients with cancer in South India. The study revealed that the mean post-intervention intensity pain and quality of life score was lower than mean pre-intervention intensity of pain and quality of life score. The study concluded that guided imagery is an effective strategy in reducing the intensity of pain and improving the quality of life of cancer patients.

The fourth objective of the study was to determine the relationship between level of pain and quality of life among patients with cancer. Among experimental group, the mean post-test score on pain was 0.66 with standard deviation 0.64 and mean post-test score on quality of life was 42.8 with standard deviation 6.1. The obtained 'r' value -0.37 was significant.

Hence, the stated hypothesis H3 was accepted. The study findings revealed that there was a significant relationship between level of pain and quality of life among patients with cancer. Thus it was concluded that pain control can improve the quality of life among patients with cancer.

The study findings are supported by Ping Yang, Li Qiu sun, Qian Lu, Dong Pang, Yue Ding, (2012) conducted a study on quality of life among 643 cancer

patients with pain in China. The study revealed that patients with pain had a lower quality of life scores. The study concluded that cancer patients with pain had a poor quality of life.

The fifth objective of the study was to determine the association between level of pain among patients with cancer and their selected demographic variables. There is no significant association between level of pain and their selected demographic variables both in experimental and control group.

The sixth objective of the study was to determine the association between quality of life among patients with cancer and their selected demographic variables. There is no significant association between quality of life and their selected demographic variables both in experimental and control group.

Hence, the stated hypothesis H4,H5 was not accepted. The study findings revealed that there was no significant association between level of pain and quality of life among patients with cancer and their selected demographic variables.

CHAPTER VI

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter presents a brief account of the present study. It deals with the summary, conclusion, and recommendation of the study. Conclusions are drawn from the findings and the implication for Nursing Practice, Nursing Education, Nursing Research and Nursing Administration are stated.

Summary of the Study

The present study was to evaluate the effectiveness of guided imagery on pain and quality of life among patients with cancer at Coimbatore.

The objectives of the study were

- To assess the level of pain among patients with cancer.
- To assess the quality of life among patients with cancer.
- To determine the effectiveness of guided imagery on pain and quality of life among patients with cancer.
- To determine the relationship between level of pain and quality of life among patients with cancer.
- To determine the association between level of pain among patients with cancer and selected demographic variables.
- To determine the association between quality of life among patients with cancer and selected demographic variables.

A quasi experimental non randomised control group design was used to evaluate the effectiveness of guided imagery on pain and quality of life among patients with cancer.

A non probability purposive sampling technique was adapted to select samples with inclusion criteria. The sample size was 60 among them 30 were in experimental and 30 were in control group.

A structured interview questionnaire was used for the study to evaluate the pain and quality of life among patients with cancer.

It consists of

PART I : Demographic variables (age, gender, educational status, occupation, monthly income, marital status, duration of illness, stage of cancer, duration of treatment, modality of cancer treatment).

PART II : Standardized Verbal Descriptor Pain Assessment Scale to assess the level of pain among patients with cancer.

PART III : Modified EORTC QLQ – C30 Scale to assess the quality of life among patients with cancer.

Pre-test was done on Day 1 followed by guided imagery intervention on Day 1,2,3,4 and 5 for duration of 20 minutes, twice a day. The post-test was done on Day 5.

Major Study Findings

- Regarding the demographic variables of the experimental and control group, majority of cancer patients belonged to the age group of 51-65 years, were females, had no formal education, self employed, earned a monthly income of Rs.5000/- -Rs.10000/-, married, having the illness for less than 1 year, were in second stage of cancer, having treatment for less than 1 year, and undergoing chemotherapy and radiation therapy.

- Regarding level of pain during pre-test all patients had moderate level of pain in both experimental and control group. During post-test among experimental group majority of patients had mild and no level of pain and among the control group all patients had moderate level of pain only.

- Regarding quality of life during pre-test majority of patients had moderate quality of life in experimental group and control group. During post-test majority of patients had good quality of life in experimental group and majority of patients had moderate quality of life in control group.

- With regard to the effectiveness of guided imagery on pain among patients with cancer the mean post test level of pain score was less than the mean pre test level of pain score in experimental group. The obtained 't' value was 19.25 which was significant at $p< 0.05$ level. In control group the mean post-test level of pain score was less than the mean pre-test score of pain. The obtained 't' value 0.34 was not significant at $p < 0.05$ level. Hence, the stated hypothesis was accepted. It is inferred that guided imagery is effective in reducing level of pain among patients cancer.

- With regard to the effectiveness of guided imagery on quality of life among patients with cancer, the mean post test score on quality of life was less than the mean pre test score on quality of life in experimental group. The obtained 't' value was 4.11 which was significant at $p< 0.05$ level. In control group the mean post-test score on quality of life was less than the mean pre-test score on quality of life. The obtained 't' value 1.52 was not significant. Hence, the stated hypothesis was accepted. It is inferred that guided imagery is effective in improving quality of life among patients with cancer.

- With regard to the relationship between the level of pain and quality of life among patients with cancer, obtained 'r' value is -0.37. Hence, the stated hypothesis was accepted. There was a significant relationship between the level of pain and quality of life among patients with cancer.

- With regard to the association between the level of pain among patients with cancer with their selected demographic variables, study findings had revealed that there was no significant association between of level of pain with their selected demographic variables both in experimental and control group.

- With regard to the association between quality of life among patients with cancer with their selected demographic variables, study findings had revealed that there was no significant association between quality of life with their selected demographic variables both in experimental and control group.

Conclusion

The main conclusion drawn from the present study was that most of the cancer patients had moderate level of pain and quality of life. After receiving guided imagery intervention there was a significant reduction in level of pain and improvement in quality of life. Samples became familiar and found themselves comfortable and also expressed satisfaction. It is thus concluded the guided imagery is effective and simple strategy to reduce level of pain and improve the quality of life.

Implications of the study

According to Tolsma (1995) the section of the research report that focuses on nursing implication usually includes specific suggestions for nursing practice, nursing education, nursing research and nursing administration. Nursing implications for this study is enlisted below:

Nursing Practice

Clinical nurse can:

- Learn accurate assessment of pain and quality of life by using Standardized Verbal Descriptor Pain Assessment Scale and EORTC QLQ – C30 Scale.
- Learn the technique of guided imagery.
- Understand the importance of guided imagery.
- Encourage the care givers to use guided imagery as a complementary therapy.
- Recognize the findings of the current study that can be kept as baseline for providing instructions to cancer patients with pain and poor quality of life.

- Suggest this mind-body approach of guided imagery for managing pain and improving sense of well being among patients with cancer.

Nursing Education

Nurse educators can motivate student to:

- Learn accurate assessment of pain and quality of life among patients with cancer by using Standardized Verbal Descriptor Pain Assessment Scale and EORTC QLQ – C30 Scale.
- Learn the techniques of guided imagery and its mechanism in reducing pain and improving quality of life.

Nursing Research

Nurse researcher can

- Add to the research review about the importance of guided imagery on pain and quality of life among patients with cancer.
- The study findings can be kept as the baseline data and further research can be conducted in different setting.
- Disseminate the findings through journals and publications.

Nursing Administration

Nurse administrator can:

- Organize in-service education programmes for the nurses on this complementary technique.

- Make cost effectiveness on the nursing care by reducing the usage of analgesic for pain among patients with cancer.

Recommendations

- The same study can be conducted in different settings such as hospitals and community.
- The study can be replicated in large sample size.
- Effectiveness of this technique can be compared with other complementary therapies to find its effectiveness.
- The same study can be conducted as a longitudinal study.
- The same study can be conducted with different sampling technique.
- The same study can be conducted with Solomon four group, time series, one group pre test-post test design.
- The same study can be done with other physical, psychosocial problems among patients with cancer.

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APPENDIX A

Letter Requesting Experts Opinion for Content Validity of the

Tools and Intervention.

ANNAI MEENAKSHI COLLEGE OF NURSING

Affiliated with the Tamil Nadu Dr. M.G.R Medical University, Chennai.
Approved by the Indian Nursing Council, New Delhi &
Tamil Nadu Nurses and Midwives Council, Chennai.

Madukkarai Market Road,
P.B. No. 4431
Industrial Estate Post,
COIMBATORE - 641 021.

Phone : 0422 - 2675641, 2672705
Fax : 0422 - 2676016
Email : ceandct@dataone.in
ceandct@gmail.com
Website: www.annaimeenakshi.in

Ref. No.

Date : .....

Requisition for Content Validity

From

Mrs. Maheswari.G
II - Year M.Sc(N)
Annai Meenakshi College of Nursing,
Coimbatore – 21.

Through

The Principal,
Annai Meenakshi College of Nursing,
Coimbatore – 21.

To

Respected Sir/Madam,

Sub: Requisition for expert opinion and suggestion for content validity of the tools – Reg.

I am a student of M.Sc., Nursing II year of Annai Meenakshi College of Nursing, Coimbatore, affiliated to The Tamil Nadu Dr. M.G.R. Medical University, Chennai. As a partial fulfillment of the M.Sc., Nursing programme. I am conducting **"A Study to Evaluate The Effectiveness of guided imagery technique on quality of life among patients with cancer in a selected hospital at Coimbatore".** I am hereby enclosing the following:

1. Statement and objectives of the study
2. Hypothesis
3. Methodology
4. Tool
5. Intervention
6. Content Validity certificate.

I Kindly request your guidance and valuable suggestions on the content submitted with this. It would be helpful for me to proceed my dissertation.

Thanking you,

Yours faithfully,

PRINCIPAL
Annai Meenakshi College of Nursing
COIMBATORE-641 021.

Place: Coimbatore
Date:

APPENDIX B

Certificate of Validation.

ANNAI MEENAKSHI COLLEGE OF NURSING

Affiliated with the Tamil Nadu Dr. M.G.R Medical University, Chennai.
Approved by the Indian Nursing Council, New Delhi &
Tamil Nadu Nurses and Midwives Council, Chennai.

Madukkarai Market Road,
P.B. No. 4431
Industrial Estate Post,
COIMBATORE - 641 021.

Phone : 0422 - 2675641, 2672705
Fax : 0422 - 2676016
Email : ceandct@dataone.in
ceandct@gmail.com
Website: www.annaimeenakshi.in

Ref. No.

Date : .....

Certificate of Validation

This is to certify that the tool submitted by Mrs. Maheswari.G., M.Sc (N) II - Year student of Annai Meenakshi College of Nursing, Coimbatore, Tamil Nadu (Affiliated to The Tamil Nadu Dr. M.G.R. Medical University, Chennai) is validated by undersigned and can proceed with this tool and conduct the dissertation entitled "A Study to Evaluate The Effectiveness of guided imagery technique on quality of life among patients with cancer in a selected hospital at Coimbatore".

Place: Coimbatore

Date:

Signature

Name and Designation

PRINCIPAL
Annai Meenakshi College of Nursing
COIMBATORE-641 021.

APPENDIX – C

Name List of Experts who validated the Tool

- DR. P. SUTHAHAR MD.,RT.,

  Consultant Clinical Oncologist,

  Ashwin Hospital,

  Coimbatore.

- DR. P.T. SALEENDRAN, MBA.,Ph.D.,

  Associate Professor,

  DJ Academy for Managerial Excellence,

  Coimbatore.

- MRS. NIRMALA M.Sc., (N)

  HOD, Medical Surgical Nursing,

  Professor,

  Kongunadu College of Nursing,

  Coimbatore.

- MRS. P. VIJI M.Sc., (N)

  Professor,

  GKNM College of Nursing,

  Coimbatore.

- MRS. C. DEBORAH BACKIAJOTHI M.Sc., (N)

  Professor,

  GKNM College of Nursing,

  Coimbatore.

- MRS. A. SANTHI PRIYA M.Sc., (N)

  Reader,

  KG College of Nursing,

  Coimbatore.

- MS. INDHIRA M.Sc., (N)

  Reader

  Nightingale College of Nursing,

  Coimbatore.

APPENDIX D

Letter Seeking and Granting Permission to Conduct Study.

ANNAI MEENAKSHI COLLEGE OF NURSING

Affiliated with the Tamil Nadu Dr. M.G.R Medical University, Chennai.
Approved by the Indian Nursing Council, New Delhi &
Tamil Nadu Nurses and Midwives Council, Chennai.

Madukkarai Market Road,
P.B. No. 4431
Industrial Estate Post,
COIMBATORE - 641 021.

Phone : 0422 - 2675641, 2672705
Fax : 0422 - 2676016
Email : ceandct@dataone.in
ceandct@gmail.com
Website: www.annaimeenakshi.in

Ref. No. Ref: AMC/108/2013

Date : May 8, 2013

To

The Administrative Officer,
Ashwin Hospital,
Coimbatore.

Respected Sir,

Mrs.Maheswari.G., is a student of M.Sc., (Nursing) II year, student of Annai Meenakshi College of Nursing, Coimbatore. She is conducting a study to **"Evaluate the effectiveness of guided imagery technique on quality of life among Patients with Cancer in a Selected hospitals at Coimbatore"**

This is for her research work to be submitted to the Tamil Nadu Dr. M.G.R. Medical University in Partial fulfillment of the university requirement for the award of M.Sc., (Nursing) Degree.

As a part of her study she would like to collect the data from clients with Cancer, of your esteemed Institution. Further details of the proposed project will be furnished by the student personally.

Kindly give her permission for the same reason. The norms, ethics and policies practiced by the college will be addressed by the student.

Thanking you,

Yours faithfully,

5/6/13

ASHWIN HOSPITAL CBE-12

PRINCIPAL
Annai Meenakshi College of Nursing
COIMBATORE-641 021.

APPENDIX E

LETTER SEEKING CONSENT OF SUBJECTS FOR PARTICIPANTS IN THIS STUDY

Respected Sir/Madam,

I am Maheswari. I am doing my second year M.Sc(N) in Annai Meenakshi College of Nursing. I am doing study project on Effectiveness Of Guided Imagery on Pain and Quality of Life among Patients with cancer in selected hospital at Coimbatore. I request your cooperation to complete my study project. I am sure that you won't get any side effect by doing Guided Imagery.

I Mr./Mrs._____ was informed about the Effectiveness of Guided Imagery on Pain and Quality of Life among Patients with cancer by Mrs.Maheswari. She explained me about the benefits and procedure of this Guided Imagery. I accept this study project whole heartedly.

Yours sincerely,

Place: Coimbatore

Date:

APPENDIX G

SECTION A

Structured Interview Questionnaire (English)

Tool

Dear participants:

Listen carefully and answer appropriately to enable the interviewer to mark (√) based on your response.

Questionnaire to assess the demographic variables of patients with cancer

Sample No:

Date:

Demographic Data

1. Age (in years)

a) 20 to 35 years ( )

b) 36 to 50 years ( )

c) 51 to 65 years ( )

2. Gender

a) Male ( )

b) Female ( )

3. Educational Status

a) No formal education ( )

b) Primary ( )

c) Secondary ( )

d) Higher Secondary ( )

e) Graduate / equivalent ( )

4. Occupation

a) Self employed ( )

b) Private employee ( )

c) Government employee ( )

d) Unemployed ( )

5. Monthly Income

a)Rs 5,000/- - Rs 10,000/- ( )

b) Rs10,000/- - Rs 15,000/- ( )

c) Above Rs 15,000/- ( )

6. Marital Status

a) Married ( )

b) Unmarried ( )

c) Divorced ( )

d) Widow/widower ( )

7. Duration of illness

a) < 1 year ( )

b) 1-3 years ( )

c) > 3 years ( )

8. Stage of Cancer

a) 1st stage ( )

b) 2nd stage ( )

c) 3rd stage ( )

d) 4th stage ( )

9. Duration of treatment

a) Less than – 1 year ( )

b) 1 – 3 years ( )

c) More than 3 years ( )

10. Modality of cancer treatment

a) Chemotherapy ( )

b) Radiation therapy ( )

c) Both ( )

d) Surgery Therapy ( )

SECTION – C

MODIFIED EORTC QLQ – C30 Scale

Dear participants:

Listen carefully and answer appropriately to enable the interviewer to mark (√) based on your response.

S.No	Questionnaire	Not at all	A little	Quite a bit	Very much
		1	2	3	4
1	Do you have any trouble doing strenuous activities, like carrying a heavy shopping bag (or) a suitcase?				
2	Do you have any trouble taking a long walk?				
3	Do you have any trouble taking a short walk outside of the house?				
4	Do you need to stay in bed or a chair during the day?				
5	Do you need help with eating, dressing, washing yourself or using the toilet?				
	During the past week				
6	Were you limited in doing either your work or other daily activities?				
7	Were you limited in pursuing your hobbies				

	or other leisure time activities?				
8	Were you short of breath?				
9	Have you had pain?				
10	Did you need to rest?				
11	Have you had trouble sleeping?				
12	Have you felt weak?				
13	Have you lacked appetite?				
14	Have you felt nauseated?				
15	Have you vomited?				
16	Have you been constipated?				
	During the past week				
17	Have you had diarrhea?				
18	Were you tired?				
19	Did pain interfere with your daily activities?				
20	Have you had difficulty in concentrating on things? Like reading a newspaper or watching television?				
21	Did you feel tense?				
22	Did you worry?				
23	Did you feel irritable?				
24	Did you feel depressed?				
25	Have you had difficulty remembering				

	things?				
26	Has your physical condition or medical treatment interfered with your family life?				
27	Has your physical condition or medical treatment interfered with your social activities?				
28	Has your physical condition or medical treatment caused your financial difficulties?				

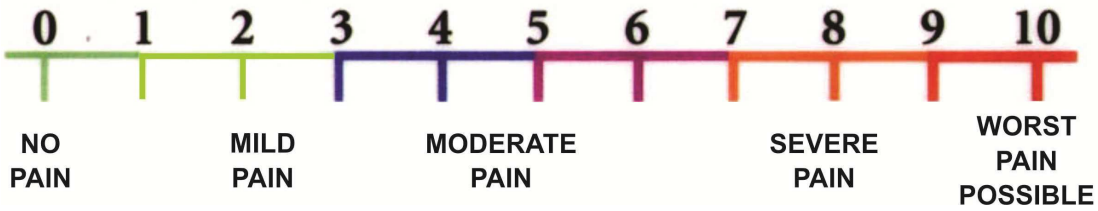
SECTION – B

Universal Pain Assessment Tool

Verbal Descriptor Scale

Dear participants:

Listen carefully and answer appropriately to enable the interviewer to mark (O) based on your Pain response.



பிற்சேர்க்கை H

பகுதி அ

புற்றுநோயால் பாதிக்கப்பட்ட தகவலாளர் விபரம்

அன்பான பங்கேற்பாளர்களே,

கவனமுடன் சரியான விடையை (√) அடையாளத்தைக் குறியிட்டு நேர்காணல் எடுப்போர்க்கு ஏதுவாக உங்கள் பதிலைக் கூறவும்.

மாதிரி எண் :

1. வயது (வருடங்களில்)

அ) 20லிருந்து–35 வரை ( )

ஆ) 36லிருந்து–50 வரை ( )

இ) 51லிருந்து –65 வரை ( )

2. பாலினம்

அ) ஆண் ( )

ஆ) பெண் ( )

3. கல்வித்தகுதி

அ) முறையான கல்வியின்மை ( )

ஆ) ஆரம்பக் கல்வி ( )

இ) உயர்நிலைக் கல்வி ( )

ஈ) மேல்நிலைக் கல்வி ( )

உ) பட்டப்படிப்பு (அ) அதற்கு இணையான கல்வி ( )

4. தொழில்

அ) சுயதொழில் ( )

ஆ) தனியார் பணி ( )

இ) அரசுப்பணி ( )

ஆ) பணி இல்லாதவர் ( )

5. வருமானம்

அ) ரூ.5000 – இருந்து ரூ.10000 வரை ( )

ஆ) ரூ.10000 – இருந்து ரூ.15000 வரை ( )

இ) ரூ.15000க்கும்மேல் ( )

6. திருமண நிலை

அ) திருமணமானவர் ( )

ஆ) திருமணம் ஆகாதவர் ( )

இ) விவாகரத்தானவர் / தனித்திருப்பவர் ( )

ஈ) மனைவி (அ) கணவரை இழந்தவர் ( )

7. நோயின் கால அளவு

அ) ஒரு வருடத்திற்கு குறைவாக ( )

ஆ) ஒன்று முதல் 3 வருடங்கள் ( )

இ) 3 வருடத்திற்குமேல் ( )

8. புற்றுநோயின் நிலை

அ) முதல் நிலை ( )

ஆ) இரண்டாம் நிலை ( )

இ) முன்றாம் நிலை ( )

ஈ) நான்காம் நிலை ( )

9. சிகிச்சையின் கால அளவு

அ) ஒரு வருடத்திற்கு குறைவாக ( )

ஆ) ஒரு வருடம் முதல் 3 வருடங்கள் வரை ( )

இ) 3 வருடங்களுக்கு மேல் ( )

10. புற்றுநோய்க்கான சிகிச்சை முறை

அ) கீமோதெரபி ( )

ஆ) கதிர்வீச்சு ( )

இ) இரண்டும் ( )

ஆ) அறுவை சிகிச்சை முறை ( )

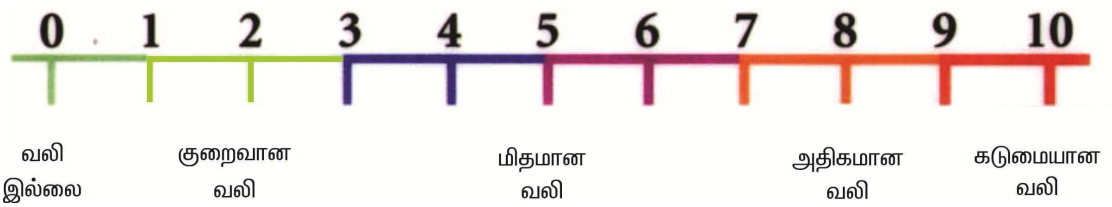
பகுதி ஆ

உலகளாவிய வலி மதிப்பீட்டு கருவி

வாய்மொழி மதிப்பீட்டு அளவு

அன்பான பங்கேற்பாளர்களே,

கவனமாக கவனித்து சரியான விடையை (O) அடையாளத்தை நேர்க்காணல் எடுப்போர்க்கு ஏதுவாக உங்கள் பதிலைக் கூறவும்.



பகுதி இ

மாற்றப்பட்ட இஒஆர்டிசி – வாழ்க்கை தரத்திற்கான கேள்விகள் –

சி முப்பது அளவுகோல்

அன்பான பங்கேற்பாளர்களே,

கவனமுடன் சரியான விடையை (**V**) அடையாளக் குறியிட்டு நேர்காணல் எடுப்போர்க்கு ஏதுவாக உங்கள் பதிலைக் கூறவும்.

வ. எண்.	கேள்விகள்	முற்றிலுமாக இல்லை	சிறிதாக	மிதமாக	அதிகமாக
1	நீங்கள் கடுமையான வேலையை செய்யும்பொழுது ஏதேனும் தொந்தரவுகள் ஏற்படுகின்றதா ? உதாரணமாக பொருட்கள் உள்ள பை அல்லது பெட்டியை சுமக்கையில் ?				
2	உங்களுக்கு வீட்டிற்கு நடைப்பயணம் மேற்கொள்ளும் பொழுது ஏதேனும் பிரச்சனைகள் ஏற்படுகின்றதா ?				
3	நீங்கள் வீட்டிற்கு வெளியே குறகிய நடை பயணம் மேற்கொள்ளும் பொழுது ஏதேனும் பிரச்சனைகள் ஏற்படுகின்றதா ?				
4	நீங்கள் பகலில் மெத்தையில் படுக்க அல்லது நாற்காலியில் அமர விரும்புகிறீர்களா ?				
5	நீங்கள் சாப்பிட, ஆடை உடுத்த குளிக்க அல்லது கழிவறையை பயன்படுத்த மற்றவரின் உதவி தேவைப்படுகிறதா ?				
	கடந்த வாரத்தின்போது				
6	நீங்கள் உங்கள் வேலையை செய்வதில் அல்லது அன்றாட நடவடிக்கைகளில் ஈடபட ஏதேனும் வரையறை இருந்ததா ?				
7	நீங்கள் உங்கள் பொழுதுபோக்குகளில் அல்லது ஓய்வுகால செயல்களில் ஈடுபட ஏதேனும் வரையறை இருந்ததா ?				
8	உங்களால் முச்சுவிட முடியாமல் இருந்ததா ?				
9	உங்களுக்கு வலியாக இருந்ததா ?				
10	உங்களுக்கு ஓய்வு தேவையாக இருந்ததா ?				
11	உங்களுக்கு தூக்கம் பிரச்சனையாக இருந்ததா ?				

வ. எண்.	கேள்விகள்	முற்றிலுமாக இல்லை	சிறிதாக	மிதமாக	அதிகமாக
12	நீங்கள் பலவீனம் உள்ளவர்களாக உணர்ந்தீர்களா ?				
13	உங்களுக்கு பசியில்லாமல் இருந்ததா ?				
14	உங்களுக்கு வாந்தி வருவதுபோல் இருந்ததா ?				
15	நீங்கள் வாந்தி எடுத்தீர்களா ?				
16	உங்களுக்கு மலச்சிக்கல் பிரச்சனை இருந்ததா ?				
	கடந்த வாரத்தின்போது				
17	உங்களுக்கு வயிற்றுப்போக்கு இருந்ததா ?				
18	நீங்கள் களைப்படைந்தீர்களா ?				
19	உங்கள் அன்றாட நடவடிக்கைகளில் வலியை உணர்ந்தீர்களா ?				
20	நீங்கள் செய்தித்தாள் அல்லது தொலைக்காட்சியை பார்க்கும்பொழுது உங்கள் கவனத்தை செலுத்த சிரமமாக இருந்ததா ?				
21	நீங்கள் இறுக்கமுடன் இருந்ததாக உணர்ந்தீர்களா ?				
22	நீங்கள் கவலையடைந்தீர்களா ?				
23	நீங்கள் எளிதில் கோபம் கொள்வதாக உணர்ந்தீர்களா ?				
24	உங்களுக்கு மன அழுத்தம் உள்ளதாக உணர்ந்தீர்களா ?				
25	உங்களுக்கு பொருட்களை ஞாபகம் வைத்துக்கொள்வதில் சிரமம் இருந்ததா ?				
26	உங்கள் உடல்நிலை அல்லது மருத்துவ சிகிச்சை உங்கள் குடும்ப வாழ்க்கையில் குறுக்கிடுகிறதா ?				
27	உங்கள் உடல்நிலை அல்லது மருத்துவ சிகிச்சை உங்கள் சமுக நடவடிக்கைகளில் தொந்தரவு செய்கிறதா ?				
28	உங்கள் உடல்நிலை அல்லது மருத்துவ சிகிச்சை உங்களுக்கு நிதி நெருக்கடியை ஏற்படுத்தியுள்ளதா ?				

APPENDIX I

SCORING KEY

SCORING:

Section – B consists of 0-7 score that measures level of pain and ranges from no pain to moderate pain.

INTERPRETATION OF SCORE:

The total score is interpreted as

Level of Pain	Score
No Pain	0
Mild Pain	1-2
Moderate Pain	3-7

ANSWER KEY FOR QUALITY OF LIFE SCALE

QUESTION NUMBERS	ANSWERS	SCORE
1	Not at All A Little Quite a Bit Very Much	1 2 3 4
2	Not at All A Little Quite a Bit Very Much	1 2 3 4
3	Not at All A Little Quite a Bit Very Much	1 2 3 4
4	Not at All A Little Quite a Bit Very Much	1 2 3 4
5	Not at All A Little Quite a Bit Very Much	1 2 3 4
6	Not at All A Little Quite a Bit Very Much	1 2 3 4
7	Not at All A Little Quite a Bit Very Much	1 2 3 4
8	Not at All A Little Quite a Bit Very Much	1 2 3 4
9	Not at All A Little Quite a Bit Very Much	1 2 3 4

QUESTION NUMBERS	ANSWERS	SCORE
10	Not at All A Little Quite a Bit Very Much	1 2 3 4
11	Not at All A Little Quite a Bit Very Much	1 2 3 4
12	Not at All A Little Quite a Bit Very Much	1 2 3 4
13	Not at All A Little Quite a Bit Very Much	1 2 3 4
14	Not at All A Little Quite a Bit Very Much	1 2 3 4
15	Not at All A Little Quite a Bit Very Much	1 2 3 4
16	Not at All A Little Quite a Bit Very Much	1 2 3 4
17	Not at All A Little Quite a Bit Very Much	1 2 3 4
18	Not at All A Little Quite a Bit Very Much	1 2 3 4
19	Not at All A Little Quite a Bit Very Much	1 2 3 4

QUESTION NUMBERS	ANSWERS	SCORE
20	Not at All A Little Quite a Bit Very Much	1 2 3 4
21	Not at All A Little Quite a Bit Very Much	1 2 3 4
22	Not at All A Little Quite a Bit Very Much	1 2 3 4
23	Not at All A Little Quite a Bit Very Much	1 2 3 4
24	Not at All A Little Quite a Bit Very Much	1 2 3 4
25	Not at All A Little Quite a Bit Very Much	1 2 3 4
26	Not at All A Little Quite a Bit Very Much	1 2 3 4
27	Not at All A Little Quite a Bit Very Much	1 2 3 4
28	Not at All A Little Quite a Bit Very Much	1 2 3 4

SCORING:

Section – C contains 28 questions, in that each answer carries score like

Minimum Score - 1

Maximum Score - 4

The total maximum score is about 112 marks and minimum score is 28 marks.

INTERPRETATION OF SCORE:

The total score is interpreted as

Quality of Life	Score
Good Quality of Life	28 – 49
Moderate Quality of Life	50 – 91
Poor Quality of Life	92-112

APPENDIX J

GUIDED IMAGERY

Guided imagery is a technique used by many natural or alternative medicine practitioners as well as some physicians and psychologists for aiding clients and patients to use mental imagery to help with anything from healing their bodies with cancer guided imagery to solving problems or reducing stress.

INDICATIONS

- chronic pain relief
- Fight cancer
- Obesity management
- Stress reduction and management
- As an adjuvant in cancer management.
- Relaxation training.
- Depression
- Anxiety disorders
- Smoking cessation
- Cure Insomnia
- Terminal illness and end of life care
- Preparation for surgery and medical procedures.

PURPOSE

Physiological Benefits

- Increase ability to manage pain
- Decrease level of circulating stress hormones.
- Decrease BP.
- Decrease blood glucose levels.
- Decrease rate of oxygen consumption.
- Decrease severity of headaches
- Improve sleep
- Boost immune system

Psychological Benefits

- Improve quality of life
- Lower levels of anxiety and stress
- Increase in serotonins levels
- Improve management of depression
- Decrease substance abuse
- Improve overall psychological health
- Enhance senses of mastery and self confidence.

Contra Indications

- Organic Brain Syndrome

- Psychosis
- Pre psychosis

Mechanism of Action

Imagery influences the experience of pain by acting as a cognitive distraction. Imagery may function as one of many relaxation techniques. The relaxation effect results in reduction of autonomic activity and the concomitant physiological responses to catecholamine production. In addition, relaxation may facilitate the release of endorphins which bind to opioid receptor sites in the central nervous system and block the transmission of painful impulses.

Preliminary Assessment

- Assess the working condition of the laptop and head phone.
- Confirm with ward sister that no other routine ward procedures coincide with the selected time of intervention.
- Ensure that the patient follows routine medical treatment.
- Check the pretest level of quality of life and pain among patients with cancer.

Preparation of the patient

- Explain the procedure to the patient.
- Get written consent from the patient.
- Ask Patient to wear loose and comfortable clothing.
- Ask Patient to sit comfortably in a chair/bed.

Preparation of the articles

The articles required are

- Laptop with recorded script for guided imagery.
- A head phone.
- A room with calm and quiet, environment with less environmental stimuli.
- A soft couch / easy chair.

Procedure

1. Get the consent form from the patient.

2. Explain about the guided imagery to the patient.

3. Play the recorded audio and video script with the help of a head phone.

After Care

- Ask patient to remain relaxed.
- Check the working condition of the laptop and head phone and replace it is proper place.

DATA COLLECTION

INTERVENTION OF GUIDED IMAGERY